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CONTRIBUTIONS

TO THE

ARCHÆOLOGY OF MISSOURI,

BY

THE ARCHÆOLOGICAL SECTION

OF THE

ST. LOUIS ACADEMY OF SCIENCE.

PART I. POTTERY.

GEORGE A. BATES,
NATURALISTS' BUREAU,
SALEM, MASS.
1880.

1547

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PREFACE.

With the view of preserving some record of the rich prehistoric relics of the Mississippi Valley and especially in the state of Missouri, the Archæological Section of the St. Louis Academy of Science has undertaken the publication of a series of papers embodying the results of work and observations in the field by its members. These papers are intended not so much to express the theories and opinions of individual members of the Section, as to be the means of furnishing to those interested in the archæology of the country, a reliable statement of facts connected with the occurrence of prehistoric remains in this important region.

The present volume is the first of the series, and contains a general description of the southeastern Missouri district and of the pottery which has been found in such abundance in the burial mounds of that region. Characteristic specimens of the pottery have been selected for illustration from the collections of the Academy of Science and individual members, and the Section is indebted to Dr. G. Hambach for the skill and faithfulness with which he has executed the drawings on stone.

Should the present venture meet with encouragement, other volumes may soon be expected, treating of "Implements," "The Construction and Grouping of Earthworks" and "Osteological Remains."

ARCHÆOLOGICAL REMAINS
IN
SOUTHEASTERN MISSOURI.

BY

W. B. POTTER.

THE most extensive remains of the "Mound Builders," thus far discovered in Missouri, are to be found in the extreme southeastern corner of the state, in a low alluvial tract known generally as the "Swamp Region." It covers an area of about 4000 square miles and includes the counties of New Madrid, Scott, Mississippi, Pemiscot, Dunklin, Stoddard and portions of Cape Girardeau, Butler and Ripley.

From the Mississippi River, near the town of Cape Girardeau, a line of bluffs, at times bold and abrupt and always well defined, extends in a general southwesterly direction across the corner of the state and on into Arkansas. This forms the northern and western boundary of the Swamp Region and is composed of the limestones and sandstones of the *Lower Magnesian* series which underlies the higher land beyond. A thick deposit of the *Bluff* (*Loess*) formation covers these older rocks, giving a character to the scenery similar to that along the Mississippi and Missouri farther north.

The general surface of this region is but little above the mean stage of water in the Mississippi River. It is broken up into a series of long and comparatively narrow tracts of more elevated arable land, known locally as "ridges," and intervening cypress swamps, stretching from north to south, through which small sluggish streams find their way, expanding at times into open lakes and farther south into great bayous connected with the present channel of the Mississippi.

The "ridges" are generally quite level, with an average elevation above the swamps of fifteen to twenty feet. The soil is very rich and has been cultivated

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NOTE.—The Survey, the results of which are given in this paper, was begun in the spring of 1876, and continued at such intervals, as the pressure of other duties afforded for visiting the district. The field work was completed in the spring of 1878, by my assistant, Mr. Carl Henrich, who prepared the drawings, and furnished valuable notes of observations.—W. B. P.

in many places for more than fifty years, yielding fine crops of wheat and corn. Occasionally a break appears in these ridges in the form of a slightly depressed area entering obliquely from the still lower swamps and stretching entirely across the "ridge," or gradually fading away into the general level within a short distance. During the greater part of the year, these "aroyas," as they might be called, contain more or less water. They are for the most part, therefore, left uncultivated, and are at present covered with a rich growth of sycamore, cottonwood, maple, oak and ash. The soil of the main portion of the "ridges" is always a light sandy loam, while that of the "aroyas" is dark and heavy, containing more clay and vegetable mould, and resembling very closely the soil of the swamps. The length of the principal "ridges" between the swamps is from thirty to forty miles and the width from three to ten, while the smaller vary from five to twenty miles in length and two to five in width.

The lines of cypress swamps and bayous which stretch from north to south between these "ridges" are from two to twenty miles wide and twenty to forty long. The most important are the St. James Bayou on the east, the Bayou St. John, Little River, and a number of small swamps and connecting streams adjoining the St. François River on the west. Besides these there are a number of smaller swamps parallel to and connected with them. They all sustain a heavy growth of cypress, sour gum, water locust, with some red and white maple, pin and Spanish oaks, besides a great variety of small shrubs and water plants which add every year new deposits of vegetable mould to the already rich though at present useless soil.

In many of these swamps ("cypresses" or "cypries," as they are generally called) there are low, sandy ridges, two or three feet above the high-water mark in the swamps; always quite narrow though often several miles in length. The soil is light and sandy and contrasts strongly with the heavy, black muck-soil of the surrounding swamps. It is also quite different from the soil of the main "ridges," already described, being much more barren and sandy, like the fine incoherent sands of the ordinary Mississippi River deposits at the present day.

Such are the principal topographical features of the Swamp Country. It may be well before proceeding to give a description of the archæological remains connected with it, to glance at the geological changes that have taken place in this interesting region, as indicated by the facts already presented and yet to be added.

The swamp region of Missouri is but a small part of the great area, of comparatively recent deposits, having the shape of an inverted V, the apex of which lies on the Mississippi River, above Cairo, Ill., and not far from the town of Cape Girardeau, Mo. The boundary limits of this area are the well-marked lines of bluffs made up of older geological formations, one of which, as already mentioned, passes from the Mississippi River at Cape Girardeau in a southwesterly direction across southern Missouri, through Arkansas, and sweeps around to the west through Texas. The other crosses the southern part of Illinois and passes on to the southeast, across Kentucky and Tennessee, stretching away to the east through northern Alabama towards the Atlantic border.

Throughout this area, when there is no covering of more recent deposits, beds of sand and clay or fossiliferous marls, all more or less imperfectly compacted, are to be found as the representative formations of the *Tertiary* period. At that time then, the continent was at a lower level and the waters of the Gulf of Mexico, from which these deposits were laid down, reached far up the Mississippi valley above their present limits and beat against the opposing bluffs of older rocks in southern Missouri and Illinois.

Later still in *Post Tertiary* times, while the waters supplied by the retreating northern glaciers were subsiding—partly through aerial and partly through aqueous agency, the peculiar deposit known as the *Loess* or *Bluff* formation, which occurs so prominently along the valleys of the Mississippi and Missouri Rivers, was deposited. Since which time, these streams have been engaged in cutting out this *Loess* deposit, leaving it standing in almost perpendicular bluffs along their borders.

The low alluvial lands in the region under consideration, represent delta and river deposits which have been formed during the present epoch of the *Quarternary* in the broad lower valley of the Mississippi, from which the previous *Tertiary* and *Post-Tertiary* deposits were eroded by the combined action of gulf and river waters.

The lines of bayou and swamp, already described as occurring in this region, were most probably at one time the channels, through which the abundant waters of the Mississippi found their way into the adjoining gulf and are similar to those occurring near the present delta mouth of the river. The narrow and slightly elevated belts of fine sand found in the midst of the swamp, would seem to have been bars and islands in the channels, while the larger tracts of cultivated land ("ridges") lying between the swamps represent the more extensive areas of dryland and marsh, such as may be seen near the channel at this day.

In consequence of changes in the flow of water in the river and the gradual retreating of the waters of the gulf, the shifting current probably left these old channel lines cut off from the general circulation. In process of time, as the water in them became reduced, vegetation sprang up and the once open water-courses were converted into lines of swamp. Occasional overflows probably carried into these places mud and silt, which, with the accumulating deposits of decaying vegetation, gradually raised them to their present level.

The low bottoms or "*arroyas*" of the "ridges," are evidently subordinate portions of the old water-courses, which have been, in some cases, somewhat elevated by earthquake action, or have been silted up more rapidly than the main water-courses, owing to their having, from their land-locked position, received more of the material washed down from the "ridges."

It may have been that, during the time of the "Mound Builders," the present swamps were open water-courses, since all their principal works, especially the settlements, so far as observed in this region, were formed on the banks of the "ridges" and not in the interior.

In the early part of the present century and especially during the years 1811 and 1812, this swamp region was visited by a series of earthquakes, and striking evidences of their action are still to be seen in many places. Well-marked traces of old land-slips and crevasses are frequently to be met with along the borders of the "ridges;" also large sink holes and occasionally, circular areas of barren quicksands, showing where sand and water had been forced up from below through rents in the yielding alluvial soil. So far as observed, there are no evidences whatever of similar disturbances having taken place, previous to the construction of any of the works of the "Mound Builders" in this region.

The portion of country brought within the limits of the present survey, includes two tracts: one, a portion of the "ridge" known as the "Sandy Woods Ridge," near the town of Diehlstadt on the St. Louis, Iron Mt. and Southern R.R. in Scott Co.; the other, including the greater part of the "New Madrid and Sikeston Ridge" in New Madrid Co. The former embraces one settlement and system of works, as shown on Plate A; and the latter includes four large settlements besides a number of smaller works, shown on Plate B.

The "Sandy Woods Settlement."

The "ridge," on which this settlement is located, is about twelve miles long and one to three miles wide. It runs south from the Mississippi River near the town of Commerce, between the "North Cut Cypress" on the east and the "State Grade," an offshoot of the Bayou St. John, on the west. That part of the "ridge" on which the mound-remains to be described are situated, is somewhat isolated, and is nearly half a mile long by about an eighth of a mile wide. The "North Cut Cypress" bounds it on the east and lowlands or "cypries" on the north, west and south sides.

A well preserved settlement covers nearly the whole of this tract. It is composed of a group of nine mounds and a large number of circular depressions, enclosed within a wall and ditch, forming three sides of a rude parallelogram, with the long side parallel to the Cypress Swamp which bounds it on the east. [Plate A.] The wall is at present 2′ to 2′ 6″ in height and 7′ in width at the base,—at the southern end of the east wall the height is 3′ 6″. The ditch on the outside of the wall is 1′ 6″ to 3′ in depth, and about 7′ wide. The short line of ditch on the east side connects with the swamp at its lower end, and this suggests that the ditch might have been intended to carry water around the settlement, and that the wall on the inside, formed of the dirt thrown out, served to protect the settlement from overflows during high stages of water. Near the southwest corner, on the south and west sides, the ditch is deeper than elsewhere (3′ to 5′ deep). The "ridge" is also higher above the swamp at this part—a condition which would require the greater depth of ditch, such as we find, if the latter was used for carrying water.

Two cultivated fields now occupy the greater part of this settlement. That on the north has been worked for more than forty years, according to the statement of the present occupants, and the other for about ten years, and this will account for the better state of preservation of the mounds lying in the latter.

The principal mound of the group lies near the middle of the west side of the settlement. It is rectangular in plan, the base being 250′ in a north and south direction by 120′. The top, which is 16′ above the general level at the north end and 18′ at the south, is 110′ by 54′. The surface is quite regular and covered with numerous fragments of rude bricks of baked clay, containing impressions of grass or straw. Some excavations have been made in this mound, but nothing of interest obtained.

The mound next in size is that marked 20 [Plate A]—a flat-top conical mound, 20′ high, 100′ in diameter at the base, and 24′ in diameter at the top. Excavations are said to have been made in this mound some years ago, but no report could be obtained of the result.

The mound in the southwest corner of the southern field, marked (*c*), is a low conical mound, similar in form to the usual burial mounds, 4′ high and 100′ in diameter. A deserted log-house stands upon the middle of the mound, and fragments of pottery are found in large quantities scattered over the surface. Apparently no excavations have been made in this mound.

The mound (*d*) is 4′ high, 40′ in diameter, and circular in plan. No excavations have been made in it.

The mound (*e*) is circular in plan, 4′ high and 60′ in diameter. Not excavated.

The mound (*f*) is elliptical in plan, with the long axis (nearly east and west) 80′, the shortest axis 40′, and the height 4′. Not excavated.

The mound (*g*) north of the large mound is also elliptical in plan, with the long axis (about northeast and southwest) 108′ and the short axis 55′. The top is nearly level and 3′ above the general level. Slight excavations reported, but nothing of interest obtained.

The two mounds marked (*h*) are the most interesting of the group. They are burial mounds, from which eight hundred to one thousand specimens of pottery, including many of those figured in this volume, have at different times been obtained. They are low, imperfectly defined mounds, lying partly in the north field and partly outside near the swamp. They are circular in plan, 2′ high and somewhat over 100′ in diameter. A large number of human bodies were buried in these mounds and apparently without any systematic arrangement. A few were found in a sitting or kneeling posture, but most of them were extended at full length, some on the back, some on the face, and others again on the right or left side. There were two layers of bodies, the lower about one foot below the general level of the ground, and the upper within one foot of the surface of the mounds, with six inches to one foot of dry earth between the two. The earth covering each layer of human remains is quite different from the adjacent soil, being darker and containing more clay. The skulls and large bones of the skeleton are remarkably well preserved—quite soft and tender when first taken out with the heavy damp earth adhering to them, but becoming strong and hard when carefully dried. Near the heads flasks and bottles were generally found, while near, and sometimes resting upon the middle of the skeleton, bowls and flat dishes were usually obtained. It is difficult to estimate the number of bodies buried in these mounds, but it is probably between one hundred and two hundred in each.

At (*j*) and (*k*) there are sunken areas from which a portion at least of the earth for the mounds may have been taken. That at (*j*) is an irregular ellipse in outline, 110′ by 80′, and that at (*k*) nearly 300′ long by 150′ wide. Both are at present marshes, containing considerable water and a luxuriant growth of vegetation.

A marked feature of all the enclosed groups of mounds, observed in southeast Missouri, is the occurrence of a large number of circular depressions which seem to mark the site of huts or dwelling places. In the "Sandy Woods Settlement" these circular depressions are very prominent, especially outside of the cultivated fields and in the southeast corner of the south field, the surface of which has not been so often turned up by the plow. The average depth of these depressions is about 2′ and the diameter 30′. The centres are 50′ to 65′ apart. As may be seen in Plate A, there is no systematic arrangement or grouping of the depressions. In the centre and occasionally at one side of these depressions, there can be found, at a depth of about 15″ below the present surface, a square of burned or partially burned clay 30″ by 25″. The clay was evidently placed there designedly for it is entirely different from the sandy clay or loam which occurs elsewhere throughout the settlement. Small pieces of charcoal and fragments of charred bones have been obtained from these hearths. It is reported that the bones of children have been found in some cases between the depressions, but the writer had no opportunity of verifying this statement.

A glance at the plans of the other settlements will show that there is always an elliptical space near the large mound (so-called temple mound) and surrounded by other mounds, in which there are no circular depressions. It is apparent that the same arrangement was carried out at the "Sandy Woods Settlement." In the north field none of these depressions can be observed, owing to the long time it has been cultivated. Within the area, surrounded by the mounds at (*l*), there is no sign of the depressions, while in all other parts, of the south field at least, a few scattering depressions are to be seen.

The "New Madrid and Sikeston Ridge."

A portion of which is included in the present survey [Plate B] lies between two swamps, known as "East Lake" and "West Lake." The "East Lake," called also "St. Mary's Lake," runs into the "Bayou St. John" which empties into the Mississippi a little above the town of New Madrid. The "West Lake" or "Swamp" is about twenty miles wide, and through it flows a stream of considerable size called "Little River."

Mound remains are to be met with on both sides of the "ridge," near the swamps, from a point about five miles below Sikeston all the way to New Madrid. Among these are four settlements [A, B, C, D, Plate B], besides twenty or more groups of scattered mounds.

Settlement A.—The northern settlement [Plate C], on the West Lake, is about thirteen miles above the town of New Madrid on the edge of the swamp. The bluff rises about 22′ above the present water level in the swamp, and is quite steep. A wall and ditch surround the settlement, the former of which is 3′ to 3′ 6″ high and the latter 18″ to 2′ deep. The most prominent mound is that marked (33) [Plate C], placed on the edge of the bluff. It is elliptical in plan, 110′ by 70′ in diameter at the base and 11′ high. The long axis of the mound is parallel with the swamp. Excavations have been made in this mound, but nothing of importance was discovered.

The mound marked (29) is one of the burial mounds of the group. It is a low flat mound of circular outline, 90′ in diameter and 7′ 6″ high. From this mound a number of skeletons and a large quantity of pottery have been obtained from the north and east sides, the south and west sides seeming to be almost barren of remains. Col. Croswell, who devoted some time in excavating this mound, states that "there appeared to have been no observance of order in depositing the dead in this mound." * * * * "The skeletons were as often with the feet as the head to the centre, and were lying on the back, on the face, on the right side and on the left, and in two instances appeared drawn up as if in a sitting posture. As the first skeletons were uncovered on the outer margin, they were found lying side by side with a covering of about 14″ of earth. The next layer immediately above was advanced a little nearer the centre. Then followed others in the same order, until finally they were found lying six deep, the bones much decayed, separated and broken, and mingled together in a mass interspersed with the sand which had covered them."

The other burial mound marked (31), at the corner of the cultivated field of Mr. I. S. Brey, is a low flat circular mound, 120′ in diameter and 9′ high. A number of skeletons and much pottery have been taken from this mound also. Col. Croswell states that "a skeleton was found extended at full length on the back, with the skull resting upon a stone weighing sixteen pounds. The stone is a smooth drift boulder of quartzite, having at one side, which lay uppermost, nearly a flat surface with an artificial depression in the centre. It resembled the old fashioned lapstone used by shoemakers. Another singular form of burial discovered in this mound, was that of a skeleton extended on the back, with the skull resting in a shallow dish, the side next the shoulders having been removed to accommodate the head and neck, and keep the whole on a level. During the examination of the mound a hearth was exposed, covering a space of about 12′ square, in the immediate vicinity of which, three vessels were discovered which had contained yellow and red paint."

The mound marked (29) is circular in plan, 60′ in diameter and 7′ high. This is probably also a burial mound, but very little work has been done in excavating it.

There are two small mounds marked (25 and 27)—3′ and 4′ high respectively, and each 16′ in diameter. No excavations have been made in them.

The circular depressions are well marked at this settlement. They occur all over the settlement, with the exception of an oval space near the large mound, as far as the cultivated field on the south side, in which all traces of the settlement are lost. A few depressions may be seen south of the corner of the field, along the edge of the bluff, and probably the southern limit of the settlement is not far from this place. The field extends south a quarter of a mile and beyond it, in the woods, some imperfectly defined depressions occur; but there is no trace of a wall or a ditch near, and it is not probable that these are connected with the settlement on the north side. The depressions have an average depth of 27″ in the centre and a diameter of 30′. There is no definite arrangement in the placing of these depressions, as may be seen in the plan. The square of baked clay occurs generally in the centre, but is often found on one side and at a depth of about 15″. The square is 32″ by 27″, about 3″ thick, and the upper surface is much more baked than the lower. It is stated by the farmers residing near, that in the ridges between the depressions "digging nearly always discloses human and animal bones, but no pottery."

A sink occurs on the east side in the line of the wall and ditch, which may mark the place from which the earth was taken to build up the mounds. A growth of large timber covers the settlement at present, and includes such trees as sycamore, elm, maple and a few oaks. Some of these trees are 2′ to 3′ 6″ in diameter and are to be found growing on the mounds or in the depressions.

Settlement B.—Lies near the southern end of the "New Madrid and Sikeston Ridge" and about two and one-half miles due west of the former town. It is situated on a bend of the bluff which, previous to the earthquakes of 1811—12, formed the shore line of West Lake, but which is now about two miles to the east of that body of water. The intervening lowland is still called a "Cyprie" as cypress trees have stood there within the present generation. It runs south about a mile and then turns southeast to the present channel of the Mississippi, two or three miles below New Madrid. Another old water-course, now called a "Cyprie," is shown on the general map [Plate B] running southeast from West Lake to the Mississippi at the town of New Madrid. This also has become almost dry since the earthquakes of 1811—12. The Mississippi itself has made some changes in this "ridge" of late years, cutting away a considerable portion of the land at the bend and requiring the inhabitants of New Madrid to move their town farther to the north several times within the last forty years—since the survey, from which the old lines indicated on the general map were taken.

The settlement [Plate D] stands close to the edge of the bluff and about 15′ above the "Cyprie." It is known as the "Mound Group on Lewis' Prairie near Mound Church." The eastern portion is well preserved, but the western is almost completely obliterated by the plow which has passed over it for more than forty years. Fortunately the most interesting part has been preserved. The line of wall and ditch on the north side is easily traced from the fence to the corner of the settlement, where it forms an angle of 87° or 88° with the east wall. On the latter side there are two walls having a height of 3′ 6″ to 4′. At the angle there is a flat circular mound 125′ in diameter and 5′ high, resembling the usual burial mounds, but no excavations have been made in it as yet. This portion of the settlement is likely soon to be destroyed, as it has recently been fenced in and forms part of a cultivated field.

The usual oval space, free from the circular depressions, is well marked here and the great mound of the group stands in it. The long axis of the latter does not coincide, however, with the long axis of the clear space, as in the case of the other settlements. The large mound has a level top 165′ long by 110′ wide at the middle, the north end being somewhat wider than the south end. Its base is 270′ by 140′ to 210′ and the height 21′. A section through the line *c d* shows the outline.

The members of the Mound Church, close by, use this mound for the burial of their dead and have, as becomes good Christians, (?) thrown out the bones of the unknown heathen to make room for the elevation of their own dead. No more successful plan could have been devised for not only ensuring the gradual destruction and loss, but of preventing the proper exhumation and study of these interesting ancient remains. Many years ago Prof. Swallow, of the State University, was afforded an opportunity of excavating in the mound. He cut a ditch through to the centre and found a number of skeletons and specimens of pottery. It is said that these were found in groups, 10′ to 12′ apart, enclosed in baked clay and indeed fragments of the latter material are plentifully scattered over the surface at present. A list of the relics obtained and a description of the occurrence may be found in one of the late Annual Reports of the Peabody Museum at Cambridge where the collection is deposited.

North of the large mound there is a nearly square, flat-top mound, 11′ high, 150′ by 120′ at the base and 90′ by 60′ on the upper surface. Its long axis forms an angle of about 50° with that of the great mound. The western part has been levelled to make room for the fence, and the portion exposed in the cut shows that baked clay forms an important element in its construction. Messrs. Kochtitzky and Smith, of the L. R. V. and A. R. R., report that they did some digging in this mound in the summer of 1877 and found some human bones but no pottery.

The mound (marked 9 on Plate D) is much disturbed, excavations having been made many years ago, but no information could be obtained concerning it. The diameter is 110′ and the height 9′.

Following the edge of the open space a nearly square flat mound will be observed. This is 8′ 6″ high, 75′ square at the top and 125′ square at the base. No excavations have been made in this. Still farther on, along the edge of the open space, there is a mound of similar shape 9′ high, 42′ by 30′ at the top and 95′ by 85′ at the base. Beyond this again there is a conical round-top mound 80′ in diameter and 9′ high. Neither of the two last mentioned have been opened.

Near the corner of the settlement, among the circular depressions, a mound 7′ high and 120′ in diameter occurs. It resembles the usual burial mounds, but no excavations have thus far been made in it.

Two mounds are still visible in the cultivated field (marked 6 and 7 Plate D) but the form and dimensions cannot be given with any accuracy. Mr. John Rendsbarg, the owner of the field, reports that one mound was levelled "to make the ploughing easier" and, that "much pottery was broken up during the process."

Outside the north wall of the settlement there is a mound of singular shape, a section of which is given with dimensions on Plate D. It lies about 10° off the N. and S. (magnetic) line and the southern end approaches within a few feet of the wall and ditch.

The circular depressions are well preserved and may easily be traced around the open space as far as the cultivated field. A section through two of these (at *a–b*) shows the form and dimensions, also the position of the hearth of baked clay.

Settlement C.—The northern settlement, (C on Plate B also Plate E) on the east side of the "ridge," is situated about seventeen miles north of New Madrid on the bank of the swamp (East Lake). A wall and ditch form three sides and the swamp the fourth of a square, enclosing the best preserved of the settlements so far observed. The bank of the swamp near the north and south walls is quite high and steep, but in the intermediate portion the slope is more gradual, having evidently been subjected to a greater amount of washing.

The greater part of the settlement is in a cultivated field, and all traces of it will soon be obliterated under the levelling action of the plow.

The open elliptical space is easily traced, its long axis pointing N. 30° E. The large mound, also elliptical in plan, lies near the outer edge of this space and nearly parallel with the latter. The mound is at the base 230′ by 115′ to 135′ and at the top, which is 7′ above the general level at the south end, rises gradually to 11′ at the north end.

There are three other mounds on or near the bounding line of the clear space; two of them on the west side 2′ 6″ to 3′ high and about 30′ in diameter, though imperfectly defined and the third on the east side, nearly opposite the large mound, 11′ high and 100′ in diameter.

Among the circular depressions there are three mounds—a small one near the middle of the north wall 50′ in diameter and 5′ high; one to the south of this 70′ in diameter and 4′ high, and the third outside of the field near the swamp 90′ in diameter and 7′ high. The latter mound, on which stands the ruins of an old log cabin, has been dug over indiscriminately many times and has furnished a large amount of pottery and some human remains. Most of the latter seem to have been thrown aside as of no value, to judge from the broken skulls and fragments of bone scattered in every direction over the mound. The walls, ditches and circular depressions are quite similar in form and dimension to those of the other settlements already described.

On the north side of the settlement there are two small mounds near the edge of the bluff, one 3′ high and 50′ in diameter shown in the plan and the other of the same dimensions 50 yards farther north, not shown. Outside the west wall there are five mounds, but all too imperfectly defined to permit of even approximate dimensions being determined.

South of the settlement there are several mounds (see Plate E] the smallest of which is 4′ high, 50′ in diameter and the largest 9′ high and 160′ in diameter. No excavations have been made in any of these. Mounds similar to these are found scattered along the bank as far south as an old arm of the swamp, now nearly dry, which runs for some distance inland towards the northwest. On the south side of this old bayou the large mounds disappear and a group of twelve smaller mounds may be seen placed close together near the bluff. Ten of these are low flat circular mounds, ranging from 35′ to 110′ in diameter and 2′ 6″ to 5′ in height.

A conical mound 65′ in diameter and 6′ high occupies a somewhat central position among these, and near the north end of the group there is a low elliptical mound 80′ by 40′ at the base and 3′ 6″ high. No excavations have been made in any of these.

Settlement D.—A little farther south we come to the fourth and smallest settlement, situated on a small promontory formed by two old branches of the swamp, now quite dry, which stretch inland for a short distance. The line of wall and ditch, surrounding the settlement, follows for the greater part of its course the banks of these branches. At the south-west corner a right angle is formed and there a low flat-top mound occurs 60′ in diameter and 4′ high. There is only one mound among the depressions. It resembles the usual burial mounds in appearance and is 65′ in diameter and 4′ 6″ high.

The depressions cover the whole area within the settlement except an oval space 120′ by 90′ near the wall on the north-east side. The large flat rectangular mound does not occur in this settlement. No excavations have been made at the place.

South of and immediately adjoining this settlement, there are a large number of small mounds ranging in size from 25′ to 90′ in diameter and from 2′ to 4′ in height, with occasionally a higher conical one among them. There is no systematic arrangement in the grouping of these mounds, but they lie scattered along both sides of an old dry branch of the swamp for about three-quarters of a mile towards the southwest. Some digging has been done in these mounds, but with what result could not be ascertained.

Farther south, along the border of the "ridge," single mounds occur and a number of groups containing twelve or fourteen small mounds placed close together, but without any system. The most extensive group of small mounds occurs near Fernberg's Mill. There are seventy-five or eighty scattered over a large area, none of them over 60′ in diameter. No excavations have been made in them.

South of the last named group the mounds disappear altogether along the East Lake, and as the banks of the "ridge" are quite low, the absence of mounds may be due to the tendency to overflow at this place during the time of the Mound Builders, when the water level was relatively higher than at present.

South of settlement *A* on West Lake single mounds are occasionally met with scattered along the edge of the bluff, most of them are of the low conical type. Five miles south of the above named settlement, there is a group of seven large mounds scattered over an area of a quarter of a mile square. They are circular in plan and range from 120′ to 330′ in diameter and from 7′ to 11′ in height.

At Lewis Wallace's farm there is a group of twenty small low mounds 35′ to 50′ in diameter and 3′ 6″ to 4′ in height, with a larger one 65′ in diameter and 8′ high occupying a somewhat central position among them. Many other smaller groups occur along the bank of West Lake, but the mounds are of the same flat circular type and scattered about without any definite order or arrangement.

There are several mounds inland at some distance from the swamps. Three of them occur on or near the post-road from Sikeston to New Madrid and from nine to thirteen miles north of the latter place. They are, however, almost entirely destroyed by the cultivation of the land and it is impossible to determine their original form or dimensions.

At Wallaces farm there are two mounds 240 yards apart, one circular in plan 270′ in diameter and 9′ high, and the other elliptical in plan lying due south of it 350′ by 200′ and 13′ high.

Nine miles north of New Madrid and over a mile east of West Lake there are two large circular and two elliptical mounds shown on the general map near township line 24. The first circular mound is 17′ high and 360′ in diameter at the base and very near to it is an elliptical mound 470′ by 280′ at the base and 12′ high. Of the other pair the elliptical mound is the largest and highest, being 560′ by 360′ at the base and 14′ high, while the circular mound is 250′ in diameter and 9′ high. They are 100 yards apart at their bases. Another and similar pair of mounds are situated about half of a mile away and nearer the swamp. The circular mound is 345′ in diameter and 16′ high with a house and barn at present standing on it. The adjoining elliptical mound is 480′ by 270′ and 11′ high. Still another pair occur in an open field north of the Davis farm on the West Swamp. The elliptical mound is 480′ by 270′ and 11′ high, while that of circular outline 170 yards distant is 200′ in diameter and 6′ high.

Such is a general description of the Swamp region of south-east Missouri and an important part of the archæological remains found there. In conclusion, the following brief summary of the characteristic features of the district may be added:

I. The earthworks of the district are, with very few exceptions, found along the borders of long "ridges" of level land, close to the intervening lines of swamp and bayou, which latter seem to represent the old channels of the Mississippi River during the time of the Mound Builders.

II. The general level of the country and especially of the "ridges" is higher at present than when these earthworks were constructed. This is everywhere apparent from the relation of the old, but now dry branches of the swamps ("Cypries") to the ridges and the main lines of swamp and bayou. The cause of this change of level may be referred partly to the earthquake action of 1811—12 and earlier, of which there is abundant geological evidence as well as historical proof; and partly to changes in the quantity and flow of water in the Mississippi.

III. The earthworks consist of (*a*) what may be regarded as settlements, enclosed on three sides by lines of wall and ditch, the swamp forming the fourth; (*b*) groups of numerous small mounds scattered about without order or arrangement, some of which contain a few human remains and a little pottery, but most of which are barren; (*c*) groups of two mounds of large size, one circular and the other elliptical in plan, differing in relative size and position; (*d*) single mounds of medium size scattered indiscriminately along the banks of the "ridges" or a short distance in the interior. The use or object for which the last three classes of mounds were constructed is not at present apparent, though it must be said that they have been as yet but imperfectly examined here or elsewhere.

IV. At the settlements the ditch is always outside of the wall. It is possible that the ditch was used for conveying water around the settlement and not merely for defence, and that the wall was thrown up on the inside to protect the settlement, where the land was low, from being flooded during high stages of water in the connected water-course. The relation of level between the ditch and swamp at the "Sandy Woods Settlement" favors this view. At the other settlements the bluffs are twenty feet or more above the swamp where the ditches meet the latter, but the ditch is, as a rule, deeper at these places than elsewhere and it is most probable that the water level is much lower than in former times.

V. Circular depressions are thickly scattered over the surface within the walls of the settlements, with the exception of an elliptical area generally 600′ to 800′ by 300′ to 400′. These depressions seem to mark the sites of huts or dwelling places, a nearly square hearth of baked clay being always found in the centre or at one side.

VI. The characteristic mounds of the settlements are: (*a*) a large nearly rectangular, flat-top mound, the long axis of which is nearly parallel with the long axis of the clear elliptical space; (*b*) a few small, low, conical mounds scattered along the edge of the clear space; (*c*) one or two very low circular mounds of comparatively large diameter near the border of the settlement, which contain human remains disposed in one or more layers together with pottery; (*d*) in the case of two settlements a mound placed at one angle of the line of wall and ditch; besides a few scattered about outside the walls.

VII. The soil of the "ridges," on which the earthworks are situated, is a sandy loam, while the soil covering the mounds is in almost all cases a dark somewhat plastic clay soil which has doubtless been brought from a distance. The squares of baked earth in the circular depressions are also composed of clay differing from the surrounding soil. This clay earth is such as would be likely to occur as a deposit in quiet water and was probably obtained from the bed of old lagoons connected with the adjacent water-courses, now represented by the lines of swamp and bayou.

VIII. The relics of the Mound Builders handiwork found in this region are articles for household use or ornament and agricultural tools, with a notable absence of implements of war or the chase, such as are found so plentifully in other parts of Missouri. The pottery occurs in the greatest abundance and always in the burial mounds. Characteristic specimens of it will be found illustrated and discribed in another part of this volume. The material of which it is composed is clay, similar to that used for the hearths, and fine fragments of shells. As most of the ware is only sundried or but partially baked the addition of lime in some form would seem to be necessary to give the required coherence. Specimens of very coarse ware which have been thoroughly baked do not exhibit any traces of the fragments of shell.

Several engraved shells have been found. One of them, the property of the Archæological section, is 3″ in diameter and bears the figure of a huge spider; the other, in the collection of the writer, is 6″ in diameter with human figures drawn upon it. Both are from the expanded portion of the whorl of the *Busycon perversum*, complete specimens of which shell are occasionally found in the mounds. Beads formed from the columella of the same species are not uncommon. A plain circular disk 2½″ in diameter and ⅛″ thick of cannel-coal with two small holes near the margin was obtained from one of the burial mounds.

A few sharp pointed knives of bone and deer's horn occasionally are found, together with small pieces of grit-stone, about the size of a hen's egg, with deep grooves on all sides, showing that they had been used for sharpening the knives.

Beautiful specimens of spades and hoes of white, opaque and yellow jaspery chert, well polished and striated longitudinally at the working end, are among the agricultural tools found. These are, however, generally obtained from the open fields. and not from the mounds themselves.

Concretions of chert and jasper, such as are common to Subcarboniferous and Lower Magnesian limestones, also pebbles of quartzite and other crystalline rocks of the drift, occur frequently in the mounds. These must have been brought from a considerable distance for no such material occurs naturally in any part of the swamp region.

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THE ANCIENT POTTERY
OF
SOUTHEASTERN MISSOURI.

BY

DR. EDWARD EVERS.

FEW departments of science have become more popular in this country during the last ten or fifteen years, than that of archæology. The universal distribution of the evidences of previous occupation of this continent by a people unknown even to tradition; the frequent discussion of a subject so readily comprehended; the facility of collecting and preserving innumerable specimens of art evidently belonging to the "lost race:" all these have contributed to especially recommend the science of archæology to all educated men. This popularity has had its advantages, but its disadvantages as well. While we, no doubt, owe to it the preservation of very many interesting and valuable specimens which would otherwise have been destroyed and lost to science, and while it has prevented the destruction of many of the most important monuments of ancient civilization, it has yet had the disadvantage of distributing into many small private collections, inaccessible to those desirous of studying their characteristics, thousands of important relics, which are so much needed to shed additional light upon the history, origin, character and civilization of a people, of whom they are the only records. Again, the ease with which small collections can be obtained and the natural ambition of every man to contribute to the knowledge of all that relates to his race, have induced too many to devote their energies to the promulgation and elucidation of certain vague theories, rather than to an accurate description of those articles which they possess.

We believe that our knowledge of the *facts* relating to the prehistoric inhabitants of our continent, especially to those who inhabited the Mississippi Valley, is still too meagre and uncertain to warrant any *definite* inference as to their origin, character or civilization. What we need most, therefore, is a thorough knowledge of all that relates to them—an accurate description of all their monuments, implements and works of art, unprejudiced by any preconceived notion of their descent or of their relation to other nations; untrammeled by any theory as to the hidden meaning "or" symbolic significance of the articles we find, or of their forms and decorations. It is only after we have obtained a complete and comprehensive knowledge of all that remains as an index of their civilization that we can form a correct idea as to *what* they were, and thus secure a safe foundation for any researches as to who they were, whence they came and what has become of them.

It is the desire of the authors to contribute their mite to this general knowledge of the subject—nothing more. This paper is intended simply as a description of the pottery from the burial mounds in Southeastern Missouri.—A description, we hope, unbiased by any preconceived opinion as to the people whose relics it may be.

In selecting pottery in preference to any of the other relics of ancient civilization contained in the various collections accessible to us during our investigations, we have been governed by the idea that in this we should be most likely to find a safe index, when once correctly understood, of the specimens of hand-work which may be looked upon to a certain extent as an index of the development attained by the people who in former times inhabited that region.

At all events whether it be true; that "clay is a material so generally diffused and its plastic nature so easily discovered, that the art of working it does not exceed the intelligence of the rudest savage,"[1] or, whether the discovery of the art of pottery was the result of the slow development of intelligence and of long observation in the "rudest savage," after he had existed without it for centuries, or, whether the knowledge of it in any given nation was acquired by contact with others more advanced—in all cases, the nation practising the art would not only give to it a character indicating the degree of civilization to which it had attained, but would most likely impress upon it also the stamp of its own peculiar genius.

True, these impressions will not always be equally well defined. As a nation advances its individual peculiarities will become more pronounced and will find more definite expression in its actions, customs and works of art; while in its infancy it will be less distinct from other nations having attained the same stage of development. Again, two nations growing up under similar circumstances and in similar surroundings will naturally develop similar tastes and will give expression to them in something of the same manner. This is apt to become a source of serious error, in as much as we are led to infer an identity or, at least, an intimate relation of people whose productions resemble each other, while the resemblance may only be due to the fact, that these nations had only reached a certain stage of development at which their works of art did not yet reflect their peculiarities of character. There is a general resemblance between the early pottery of the Egyptians, the Assyrians and the Babylonians; yet in that of later date and greater artistic value the peculiarities are sufficiently distinct to denote the race to which they belong. There is, too, a general resemblance in the ancient pottery of Greece and Rome, and yet in the largest portion of it the national characteristics are so well defined that we have no difficulty in recognizing them. The pottery of the so-called "Mound-builders" bears such a striking resemblance to that of the ancient inhabitants of Peru as well as to that found in the "cliff-houses," that this has been quoted as an argument in favor of the theory that these nations were identical. Now while this may have been the case (and the theory is maintained by many of our most eminent and accomplished authorities), the argument drawn from the resemblances of ancient pottery, at that stage of development, can at best be only of corroborative value, when taken in connection with other more positive evidence.

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[1] Birch: Ancient Pottery. Introduction, page 1.

It is more than probable that when we shall have studied the pottery of the so-called "Mound-builders" more thoroughly than has been done heretofore, and when we shall have carefully described and compared the material already stored up in the various collections of this country, we shall find such characteristic differences, that we shall be compelled to abandon several of the theories that are now accepted as being true in reference to the character and customs of this people and its relations to other nations.

It is a noteworthy fact, that very little of the ancient pottery, whether found in the old world or in the new, whether in the lacustrine habitations of Switzerland, in the "Kjökken möddings" of Denmark or in the mounds of the Mississippi Valley, is of such rude construction as to indicate the first efforts of the art. All of it has already attained to a certain degree of perfection. Probably this is due, in part, to the fact that the earlier specimens were too frail and imperfect to long survive the wear and tear of daily use; in part to the fact that much of that which we find is taken from burial places and temples for which only the better specimens were selected, and to the sanctity and seclusion of which they owe their perfect preservation; in part, *perhaps*, to the length of time that may have elapsed between the discovery or acquisition of the art of making pottery and the period, at which the specimens we now find may have been used. The farther back, however, we can trace pottery among the various ancient races, the more closely do the productions of each resemble those of the rest. Even the rare specimens of the earliest Greek pottery, the later productions of which in their pure and chaste beauty surpass everything, even of modern art, very much resemble those of the ancient Peruvians.[2] There is a ready explanation for all this.

All of the pottery we find belongs to nations who have abandoned, more or less, their nomadic habits and who have followed agricultural pursuits for some

[2] Birch, loc. cit., p. 180.

time. [We notice some crude attempts to mould clay among people, who, though not strictly nomadic, yet do not practice agriculture. Thus, for instance, the Esquimaux are said to make vessels by moulding clay walls upon flat stones or to enlarge the capacity of hollow stones, etc., by raising their edges by means of clay.[3] This may possibly be the first step in the acquisition of a knowledge of pottery, but it can not be considered such yet.] "Our minds are apt to run in grooves" at all times, and the ideas of nations following the same pursuits and surrounded by more or less of the same conditions, are apt to develop in similar grooves, in regard to the manufacture of their implements and utensils. Surrounding objects would often supply the patterns, according to which vessels were fashioned; the use to which they were devoted often dictated their forms and the material at hand necessarily determined their structure and durability. Nature herself thus, in a measure, dictates the form and style of vessels and utensils. Could we obtain the first fruits of the primitive attempts at making earthen ware, we should probably find the specimens so much alike that we could not tell the productions of one nation from those of any other. If we bear this in mind, and, if in studying the pottery of a nation, we endeavor to trace it from its origin through its various stages of progress, noting as we proceed its resemblance or its dissimilarity to that of other people, but drawing no inferences not warranted by known facts, we shall arrive at a thorough knowledge of our subject and shall avoid many serious errors that other methods of investigation are apt to lead us into.[4]

In studying the pottery from the burial mounds in Southeastern Missouri, we have had access to a number of collections aggregating nearly 4000 specimens gathered in that region. The majority of these belong to the Academy of Science and to the collection of Dr. Engelmann and Prof. Potter; a few of those represented in our plates belong to smaller collections, and credit will be given in the notes accompanying the plates. In the latter we have endeavored to reproduce all the distinct types and remarkable specimens represented in the various collections, great care having been taken to secure the utmost accuracy and correct proportion in all the drawings. The relative size is noted in each figure and the specimens marked with the respective numbers of the collection to which they belong. All of the pottery here to be described was taken from a number of burial mounds in the vicinity of what are supposed to have been ancient settlements, the location and character of which are fully described by Prof. Potter in the report and in the maps printed with this description.

All of this pottery is made of a dark, somewhat greyish clay, mixed with sand and shells in varying proportions. The largest portion of it is sun-dried;

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[3] Sir John Lubbock: Pre-historic races, p. 585.

[4] How far our persistent efforts to see "resemblances" may lead us, is shown in Barber's article in the "American Antiquarian," No. 2, p. 61 et seq.

a much smaller number of vessels are baked; none of it is glazed; nor does any of it bear evidence of having been turned on the wheel, though the symmetry and accuracy of some of the specimens are such, that we can scarcely believe it possible that the unaided hand could have fashioned anything so perfect. Most of the vessels are plain black; in some of the ornamented pieces, the ornamentation is moulded in the clay (especially in the case of figures), but does not differ in color from the rest of the vessel. In many of the ornamented specimens the decoration is painted in red, white or black. This paint is not burnt into the clay, but simply laid on, and is very apt to scale off or to separate on washing, so that great care is necessary in cleaning some of the specimens to preserve the decoration. It is not easy to determine in all cases what material was used as paint. In the vessel represented by the upper right fig., pl. 18, a quantity of finely powdered red dust was found, apparently red ochre, which is supposed to have been the paint used. In some cases in which the coloring now appears of a dark red hue, the original color seems to have been black and the present tint the result of wear and tear.

The great variety of forms and our ignorance of the specific uses to which the variously shaped vessels were put, render a classification impracticable. Still, as it is desirable that we should proceed systematically, we have endeavored to group the various vessels according to some characteristic, common to a large number of them. Thus the vessels represented on the first five plates have this in common: they all have a more or less spherical body and a long cylindrical neck somewhat contracted at or near its middle. Some, and these are by far the most numerous of any represented in our collections, are plain black, well-moulded, sun-dried and unadorned. [Fig. 33 plate 2.] A few have, in addition, a rim at the base, either entire (46 pl. 1) or perforated (29 pl. 2). One of the former class represented in fig. pl. 1, has the base of the neck encircled by a projecting collar, with its under surface smoothly grooved and four bands connecting it to the body of the vessel, as though it had been the intention to pass a string through the four holes formed by the bands which should lie smoothly in the groove of the collar. A similar collar, with only two bands however, is seen in fig. 23 same plate; but instead of the hollow foot we have three short legs furnishing the support. Few specimens have the foot as large as that of fig. 4 plate 8. A very unique specimen is represented by fig. 28 plate 4. A plain, black, sun-dried jar is supported by three large feet, somewhat resembling small jugs in shape. These feet are hollow and communicate by a pretty large opening with the main cavity of the vessel; they are united to each other by narrow, flat bands, which appear to be solid. There is only one other specimen like this among the entire 4000 pieces, much less perfectly finished, however, than the one represented, being more like the Tennessee specimen given by Putnam in his "Archæological Explorations in Tennessee."[5] The peculiar shape of the vessel represented by fig. 19, plate 3, suggests the idea that it was intended to represent one of the ordinary jars just described, superimposed upon one of the open dishes in plate 10. It is more probable, however, that the potter had no such idea in his mind, but simply intended the groove and its "handles" for the reception of the cord by which the vessel was to be suspended. None of the other vessels represented in the plates mentioned have any extra support. In those in which the body is almost a perfect sphere, the bottom is just sufficiently flattened to allow the vessel to stand unsupported. In others the sphere is so much compressed as to give the body an elliptic outline, and the bottom then presents a sufficiently large surface to prevent the vessel from falling when it is set down. In very many the spherical form is almost destroyed, the bottom being made quite flat, and the upper portion either flattened (fig. 12, plate 4), or indented so as to present a scalloped appearance (fig. 15, plate 2, and fig. 6, plate 4), or certain portions of the body are made to project beyond the general surface as in fig. 50, plate 1 and in fig. 44, plate 2. The surface of the vessel pictured in fig. 210, plate 3 presents a series of elevations and depressions arranged spirally around the body of the jar. It is difficult to determine the precise method in which this spiral was formed; whether by tracing the spiral depression around the body with some blunt instrument, or by winding a string of clay about the jar and then moulding the intervening spaces into shape. The general effect of this arrangement is similar to that of the corrugated pottery of the "cliff-houses" of which it somewhat reminds us.[6] Many of these specimens are beautifully decorated, and we shall presently call attention to the principles which, we think, should guide us in all our studies of the ornamentation of ancient works of art.

The vessels presented in plates 6 and 7 all have *short* cylindrical necks and no handles, while the forms of the body are very much the same as in the figures described above, almost every variety of the former being reproduced among the latter except the three-legged forms. The specimen corresponding to fig. 85, *a*, plate 7, presents an additional interesting feature, however, in having a flat, internal lip, half covering the mouth. Its position and shape are well represented by fig. 85, *b*.

Plates 10 to 13 (inclusive) present a number of very wide-mouthed dishes, generally with two handles and no extra support; ruder in structure, less perfectly finished and less elaborately decorated than those pictured in previous plates. Of the figures on plate 14, four represent wide-mouthed dishes with more or less perfect lips—almost flat in fig. 244, more rounded and grooved in fig.

[5] Eleventh Annual Report of the Peabody Museum of American Archæology and Ethnology, p. 356.

[6] Compare plate XLIV in Geological and Geographical Survey, etc., Hayden, 1876.

250, well formed in fig. 85 and most perfect in fig. 246. The peculiar tubercular decoration is the same on all four, but we must leave it to more ingenious investigators to interpret their meaning. All of the vessels represented on this plate are plain, black, sun-dried specimens. The remaining three are remarkable only for their peculiar handles, which are readily understood by a glance at the figures.

Plate 15 represents a number of interesting specimens in regard to the use of which much curiosity has been manifested. All five of them (the 6th belongs to another class) are black, sun-dried vessels, with somewhat elongated bodies, flat, broad lips and prominent handles, four of which are in the shape of bird-heads. These heads are hollow and contain clay pellets, which rattle whenever the vessel is shaken. From a few broken specimens it would seem that these heads were fashioned separately from the body and then moulded to the latter, as the fracture is always of the same character. The peculiar shape of the vessel has suggested the theory that they were lamps, and attention has been called to their resemblance to old Roman lamps. This theory is very plausible, although no corroborative evidence has been found to prove that they were actually used for this purpose. None of them contain any oily matter or are stained by any grease spots—of course the absence of such evidence does not disprove the theory.

The vessels represented on plate 17 are not very numerous in our collections—they are shallow dishes, ruder in appearance than any of the others and probably earlier specimens. Indeed, the square shaped vessel is probably one of the earliest shapes devised by the ancient potters; it is very rarely that we find any one of them decorated.[7] The rest of these dishes differ mainly in the shape of the rims. Some are plain, some are smoothly scalloped, some sharply scalloped and one specimen has an imbattled rim. It is the only one of its kind in our collections, though it is said such specimens are very numerous in Zuñi pottery.[8]

Of all the vessels that have come under our observation none surpass those pictured on plate 22, in simplicity and beauty of form. They are all greyish black, sun-dried specimens without any painted decoration, yet their form is perfect. They seem to be exact imitations of gourds, such perhaps as were themselves used as vessels, the point at which the stem was cut off being indicated in every piece, as seen in the figures. The mouth in all is at the side, above and generally on a plane with the surface of the vessel, though a few have a short projecting neck, like the one of fig. 128.

One other specimen we desire to call special attention to here, on account of its rarity; the one represented by fig. 5, plate 18. It is the only one of the kind, and we believe it is seldom met with in any collection of the so-called Mound-builders' pottery. The neck is in the shape of a handle, the mouth being in a projecting portion of its centre. Of course, this handle is hollow throughout, to admit of the introduction of fluids.

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[7] See plate LXXI. Geological and Geographical Survey, etc., loc. cit.

[8] Bancroft—Native Races of the Pacific, Vol. IV, p. 646.

The specimens represented in the remaining plates are remarkable for the animal and human forms which they represent or with which they are decorated. They are the most interesting of all our specimens as exponents of the high degree of artistic skill attained by their manufacturers and the higher taste of the people who used them.

But the acquisition of artistic skill and the development of taste in nations are governed by the same rules as in individuals; and just as the early drawings of a number of untrained individuals subjected to the same course of instruction by the same masters will exhibit similar forms and designs, until they have acquired sufficient skill and practice to exhibit their own ingenuity, so nations widely separated and distinct from each other, but influenced by similar causes, will, in the early stages of development, produce works of art very much alike, until at such a time when their skill and practice shall enable them to give expression to their own peculiar characteristics. We believe that this view should guide us in our study of early decorative and plastic art; and that we should check the growing tendency to attribute to every ancient relic more than it actually represents. Too many of the modern investigators are not content with a simple and matter-of-fact explanation. To them every item relating to an ancient race is of "great historic" significance; every utensil that is unearthed must have been devoted to some more important and significant use than a corresponding one of the present day; every line of decoration must have some "hidden meaning;" every grotesque form necessarily represents some worshipped idol, or is symbolic of some religious or secular custom.

The simplest decoration consists of small indentations, points as it were, made with the finger or some blunt instrument, and arranged in a row (fig. 39, plate 2), or in several undulating rows (figs. 147 and 154, plate 10). Simple straight lines sometimes were used to adorn the vessels as in figs. 152, 141 and 159, plate 10, or these were used with the points to make very neat decorations, as in fig. 5, plate 10. The simple combination of straight lines, known as the fret or herring-bone decoration, and its various modifications are found on every variety of implements and vessels among all ancient races and have retained their popularity as a simple, yet beautiful ornamentation to the present day. The circle, the ellipse and their combinations form the basis of very many beautiful designs and have been a fruitful source of "hidden meanings" to modern archæological speculators. Even so simple a decoration as the concentric circles on fig. 252, plate 5 and 122, plate 6, have already been "interpreted;" while the decoration of fig. 44, plate 2, has been explained as a symbolic representation of the subdivision of the year into thirteen months, the four central spaces denoting the four seasons. To us all these are only artistic decorations, simple in design, almost perfect in execution and exhibiting a refinement of taste which we could not have expected in a people making use of the rude implements which we find in connection with their pottery. The plastic nature of clay, so ready to receive every impression that primitive ingenuity could invent, probably at an early date suggested the imitation of surrounding objects as ornaments to their vessels. These attempts, however, seem to have been the last step in the development of decorative art among those who inhabited the region about New Madrid; for we find no very perfect reproduction of any of the animal forms or of the human figure. Some of the former are too crude to enable us to determine positively what animals were intended; others though sufficiently characteristic as to form are not of such accuracy or perfection as to denote any great skill or experience in plastic art. Probably the simplest specimen of this kind that we possess is the ornament on fig. 25, plate 1, a plain disk of clay to represent the human face; two depressions denoting the eyes, a third the mouth and a prominent ridge forming the nose. Another specimen of the same type with a little more oval face, is seen in fig. 121, plate 7. Fig. 132, plate 19 represents a full head (the neck of some vessel), the facial outline of which is very much in accord with the full face on the two pieces just referred to. The heads, both animal and human, in fig. 6, plate 11; fig. 2, plate 15; fig. 277, plate 19 and figs. 5 and 6, plate 21, though more or less rude and imperfect, denote a decided progress, and form the precursors, as it were, of the reproduction of the full figure as we see it in fig. 1, plate 19; 3 and 4, plate 20 and 2 and 3, plate 21. The simplest animal form in our collection is that of the serpent. It occurs comparatively often, either on the body of the vessel as in fig. 5, plate 20, or around the base of the neck like the two serpents in fig. 275, plate 5, or wound around the body as in fig. 473, same plate. Of course it has been inferred that the serpent was an object of worship among the Mound-builders, especially by those who believe with Prof. Sayce (of Oxford), that the serpent symbol "marks a particular stage in the history of natural religion."[9] The abundance of snakes in the region inhabited by the ancient potters and the ease with which the form of the serpent can be reproduced both in painting and in plastic art, probably account for its frequent occurrence as an ornament, more satisfactorily. The owl, too, seems to have been a favorite model, though it does not occur in our collections as often nor as elaborately finished as in the "cliff-house pottery" of the ancient races of the Pacific.[10]

The attempt to make the vessel itself represent some animal or a human figure denotes a still higher order of ideas than the use of the figures as mere

[9] Quoted in the "American Antiquarian," No. 1, page 53.

[10] Hayden's reports loc. cit., plate LXVIII.

ornaments, though the execution is frequently much more imperfect. This class of specimens is found among the pottery of the Mound-builders in disproportionately large numbers, being rare in that of other nations, more especially in the ancient pottery of the old world, only two pieces at all similar to them being pictured by Birch in his "Ancient Pottery."[11] Most of these vessels are unadorned, sun-dried specimens, as figs. 2 and 76, plate 16 and fig. 1, plate 20, while a few are baked and elaborately painted like fig. 290, plate 9. These are the most characteristic specimens of the Mound-builders' pottery and are destined to form a prominent feature in all future investigations of this branch of the plastic art among the ancient races of this continent. We have been especially careful in reproducing these figures as accurately as possible and our readers will obtain from the plates and the accompanying description of each individual specimen all the facts to which special attention has not been directed in the text.

In concluding, we may say; that the only inferences which our study of the *ancient pottery of New Madrid Co.* warrant, are: that, while it teaches us nothing as to the identity of the people who produced it or of their relation to others, and while it gives us no information of their religious sentiments or their secular customs, beyond the fact that they followed the universal custom of burying objects of art or value with their dead (a custom which has survived among all nations to the present day), it does teach us, that these early inhabitants had long since emerged from a condition of barbarity and had attained a degree of civilization and culture, which, if acquired by the slow process which we observe in historic races, will date their existence back centuries before the discovery of this continent.

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[11] Fig. 18, p. 29 and fig. 188, p. 457.

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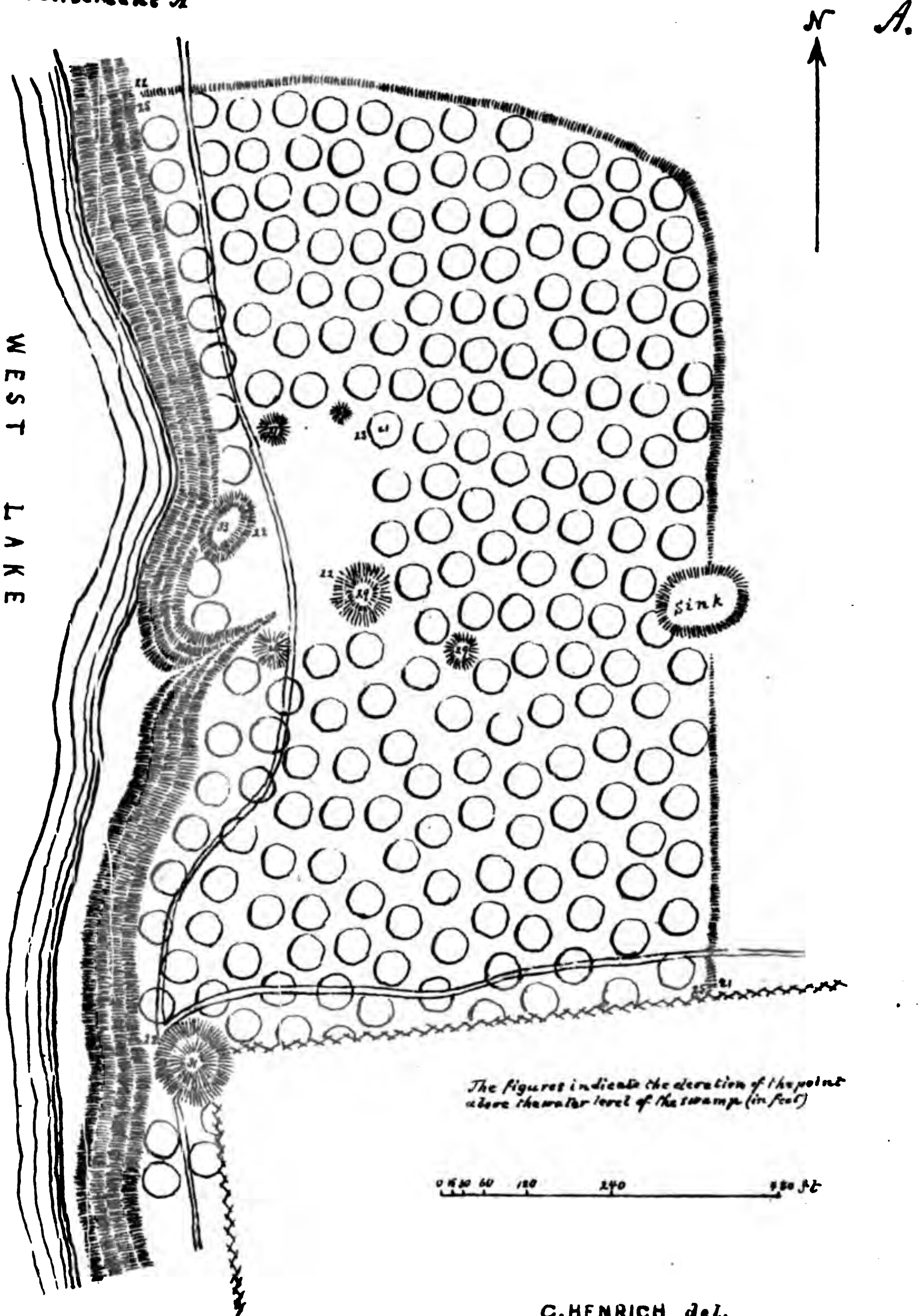
Plate C. Settlement A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A.
WEST LAKE
Sink
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25
21
The figures indicate the elevation of the point above the water level of the swamp (in feet)
0 15 30 60 120 240 480 ft

C. HENRICH del.

A Hambach fec

Lithographed by August Gast & Co's New Process. St Louis

a

Ark. Sec. St Louis Aca. of Sci.

PLATE I.

FIG. 23. A BLACK, SUN-DRIED VESSEL, WITH THREE ROUND FEET. THE NECK IS ENCIRCLED BY A HOLLOW BAND FITTED WITH TWO HANDLES, SO THAT A ROPE MIGHT BE PASSED THROUGH, WHICH WOULD FIT SMOOTHLY INTO THE HOLLOW OF THE BAND. THE SCALLOPED GROOVE ADDS MATERIALLY TO THE BEAUTY OF THIS SIMPLE DESIGN.

FIG. 24. BLACK, SUN-DRIED SPECIMEN. THE HOLLOW BAND ENCIRCLING THE NECK IS FITTED WITH FOUR HANDLES INSTEAD OF TWO; THE SCALLOPED GROOVE IS WANTING; THE CIRCULAR FOOT IS HOLLOW.

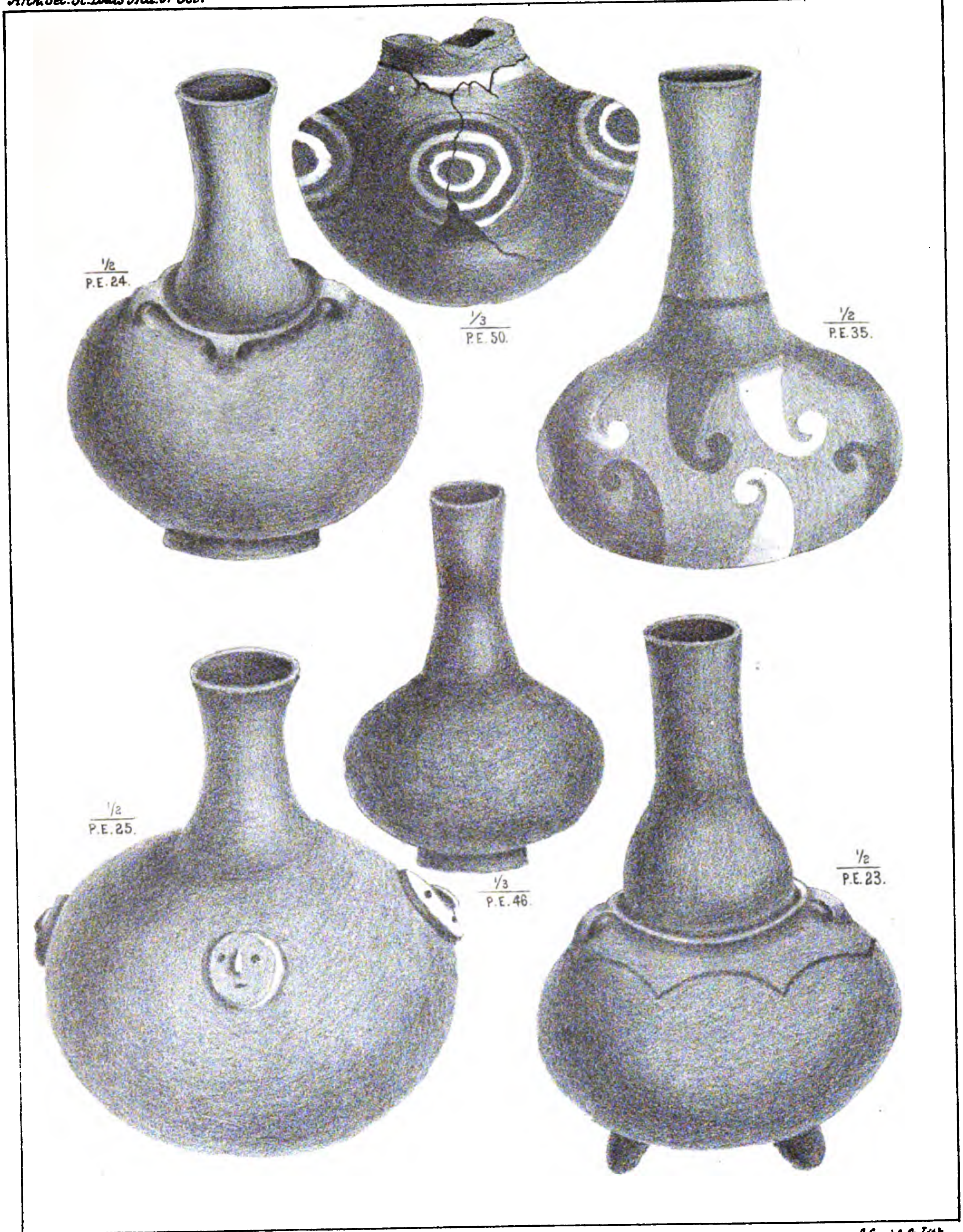
FIG. 25. SUN-DRIED SPECIMEN, ORNAMENTED WITH FOUR SMALL RUDE CASTS OF THE HUMAN FACE, WHICH SEEM TO HAVE BEEN FASHIONED SEPARATELY AND THEN APPLIED TO THE VESSEL.

FIG. 35. THIS IS A SPECIMEN OF BAKED WARE, OF VERY FINE FINISH. ITS COLOR IS BROWNISH YELLOW, AND THE DECORATION IS PAINTED IN WHITE AND RED.

FIG. 46. PLAIN, UNADORNED, SUN-DRIED SPECIMEN. THE CIRCULAR FOOT IS HOLLOW.

FIG. 50. BAKED SPECIMEN OF DARK YELLOW COLOR. THE DECORATION IS PAINTED IN ALTERNATE RED AND BROWN RINGS. THE VESSEL IS CRACKED AND THE NECK IS LOST.

PLATE 1.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P.E. 25.
1/2
P.E. 23.

G. Hambach, fec.

A. Gast & Co. Lith.

PLATE II.

FIG. 15. A PLAIN, SUN-DRIED VESSEL; BLACK; ORNAMENTED WITH THREE SCALLOPED ROWS OF FINE DOTS, APPARENTLY MADE WITH A THIN STICK.

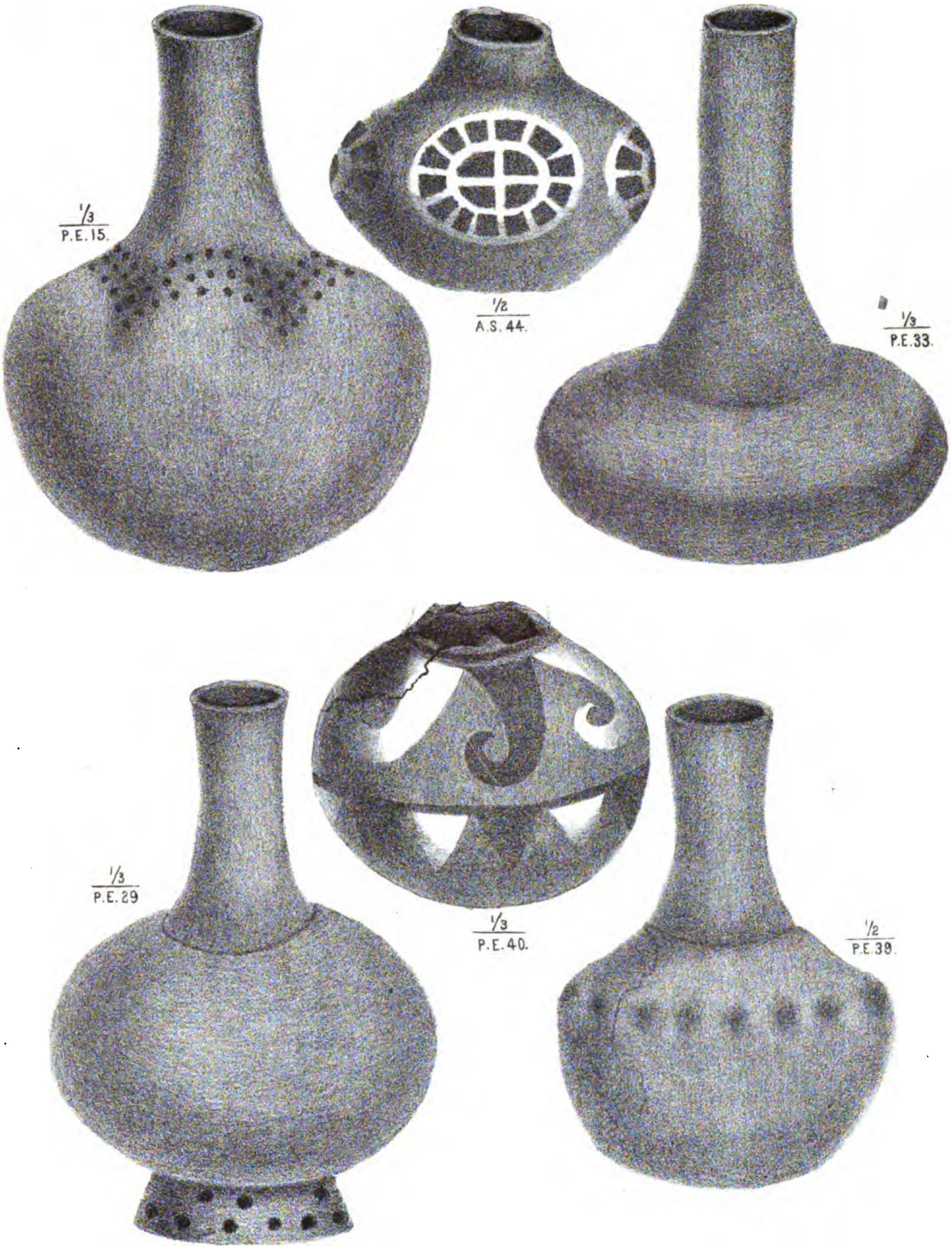
FIG. 29. BLACK, SUN-DRIED SPECIMEN; WITH QUITE A LARGE PERFORATED, HOLLOW FOOT, AND A GROOVED LINE ENCIRCLING THE NECK.

FIG. 33. PLAIN, SUN-DRIED VESSEL; BODY MUCH COMPRESSED AND FLAT-BOTTOMED; NECK CONICAL BELOW, BUT CYLINDRICAL ABOVE.

FIG. 39. BLACK, FLAT-BOTTOMED, SUN-DRIED VESSEL, ORNAMENTED BY A ROW OF SMALL DEPRESSIONS. THE IRREGULAR LINE INDICATES THE LINE OF FRACTURE IN THE SPECIMEN.

FIG. 40. BAKED SPECIMEN; YELLOW BASE, AND ORNAMENTATION IN RED AND WHITE.

FIG. 44. SUN-DRIED SPECIMEN; THE ORNAMENTATION CONSISTS OF TWO WHITE ELLIPSES; THE SPACE BETWEEN THEM BEING DIVIDED INTO THIRTEEN PARTS, AND THE SPACE ENCIRCLED BY THE INNER INTO FOUR PARTS.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1/2 A.S. 44.
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1/3 P.E. 40.
1/2 P.E. 39.

G. Hambach, fec.

A. Gast & Co. Lith.

PLATE III.

Fig. 18. Baked specimen; ground color red; ornamentation in dark red and black, symmetrical, the neck encircled by two elevated ridges separated by grooved lines.

Fig. 19. Plain unburnt vessel; funnel-shaped neck; a deep groove, spanned by two small handles, passes around the middle of the body; the specimen thus appears to be composed of two different vessels superimposed.

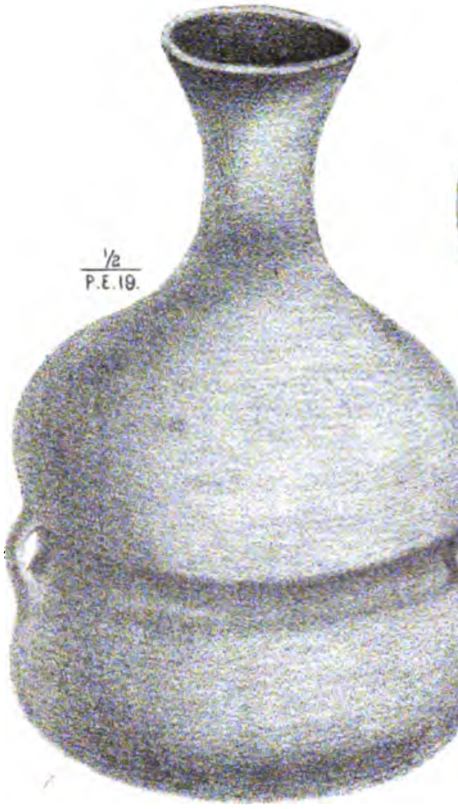
Fig. 22. Baked specimen; ornamented with brown, red and white bands.

Fig. 172. Small sun-dried specimen; flat bottom; neck encircled by an elevated band; resembling an old German medicine vial.

Fig. 210. Fine sun-dried vessel; ornamented by alternate depressions and elevations arranged horizontally and giving to the specimen a certain resemblance to "corrugated" earthenware.

Fig. 282. Rude, sun-dried irregularly formed specimen, which suggests the idea of being a "first attempt."

PLATE 3.



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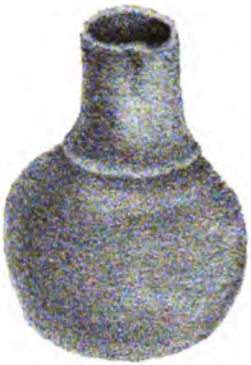

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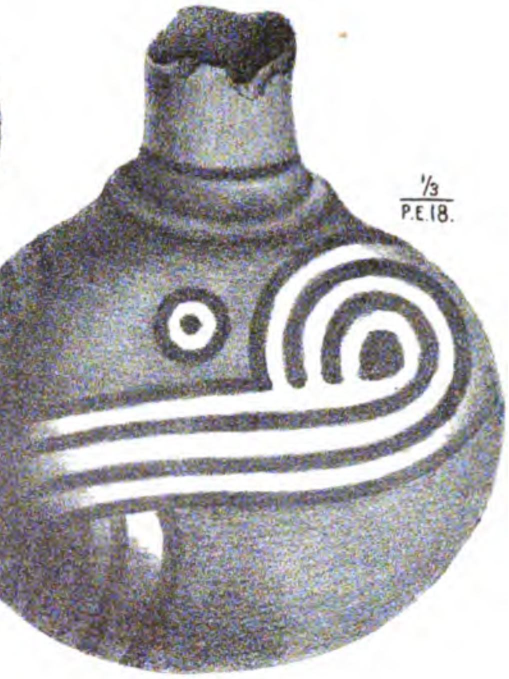

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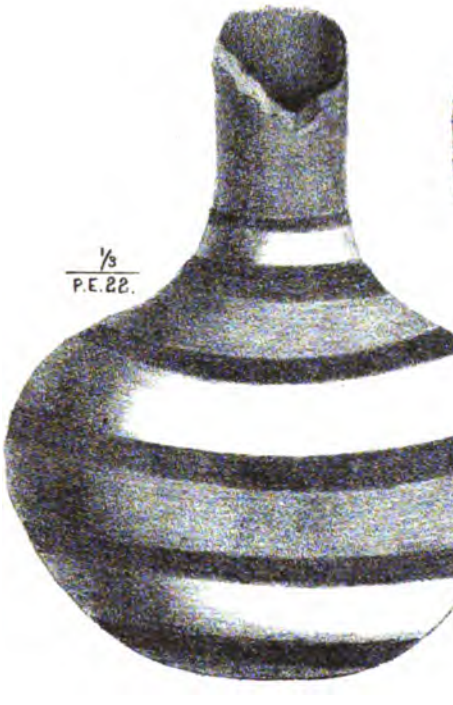

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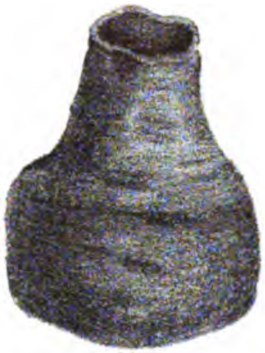

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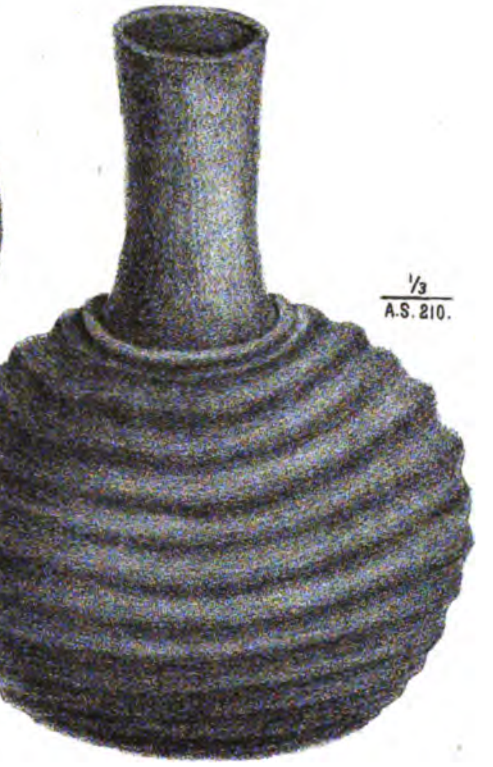

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A.S. 210.

G. Hambach, fec.

A. Gast & Co. Lith.

PLATE IV.

FIG. 1. BAKED SPECIMEN; DARK RED, WITH ORNAMENTATION IN BRIGHT RED, AND THE CENTRAL CIRCLE AND ITS FOUR DIVISIONS IN DARK RED. LOOKING AT THE SPECIMEN THE IMPRESSION IS OBTAINED THAT THE ORIGINAL COLOR OF THE VESSEL WAS LIGHT RED AND THAT THE DARK RED WAS LAID ON SUBSEQUENTLY LEAVING THE ORNAMENTATION IN THE ORIGINAL COLOR.

FIG. 6. PLAIN SUN-DRIED SPECIMEN; THE UPPER PART OF THE BODY REPRESENTING FOUR ARCHED PROTUBERANCES.

FIG. 23. BAKED SPECIMEN; BODY FLATTENED ABOVE AND BELOW; ORNAMENTATION DARK RED ON PALE RED GROUND.

FIG. 26. FINE, SMOOTH, SYMMETRICAL, FLESH-COLORED, BAKED SPECIMEN; ORNAMENTATION IN WHITE AND RED.

FIG. 28. SUN-DRIED SPECIMEN; THE THREE FEET ARE HOLLOW AND COMMUNICATE WITH THE MAIN VESSEL; THEY ARE UNITED TO EACH OTHER BY SMALL SOLID BANDS.

FIG. 47. BAKED SPECIMEN; ORNAMENTATION IN WHITE, PALE RED AND DARK RED; THE NECK IS WANTING.

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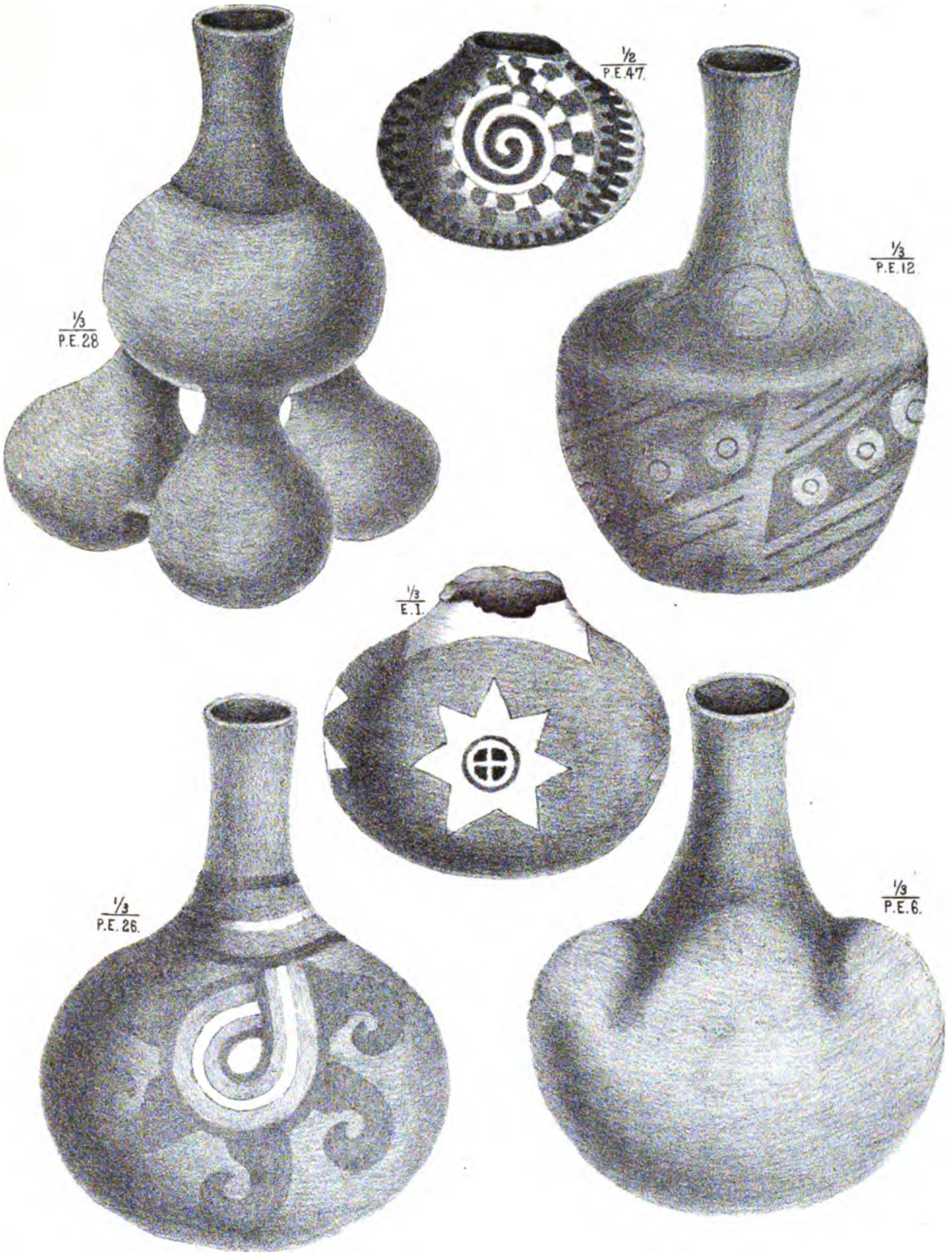
PLATE 4.



G. Hambach, fec.

A. Gast & Co. Lith.

PLATE V.

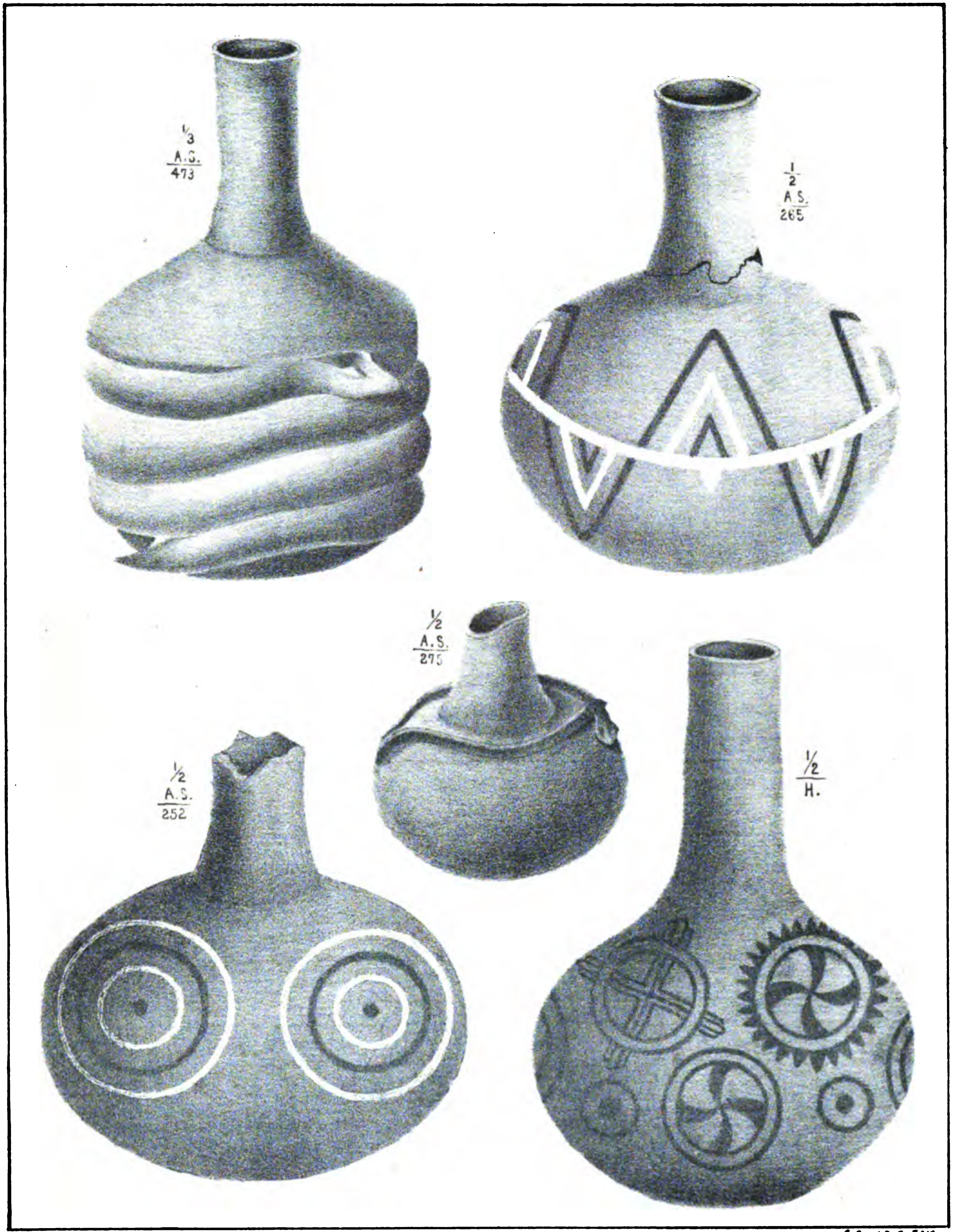
Fig. 252. Baked specimen; flesh-colored; ornamentation in red and white.

Fig. 265. Baked specimen; flesh-colored; ornamentation in red and white.

Fig. 275. Sun-dried specimen. On the upper part of the body two snakes; one head overlaps the other, but the tails do not overlap.

Fig. 473. Baked, red specimen; snake wound spirally about the body.

Fig. 20. Reddish-yellow, baked specimen; the ornaments are painted in dark red.



G. Hambach, fec. *A. Gast & Co. Lith.*

PLATE VI.

FIG. 90. BAKED SPECIMEN; FLESH-COLORED; DECORATION IN RED AND WHITE.

FIG. 91. SUN-DRIED SPECIMEN; FLAT BOTTOM; NECK PERFORATED BY TWO HOLES; THE RIM OF THE NECK INDENTED SO AS TO MAKE IT "ROPE-SHAPED."

FIG. 92. BLACK, SUN-DRIED SPECIMEN; VERY SHORT NECK.

FIG. 101. SUN-DRIED SPECIMEN; FLAT, NARROW BOTTOM; BODY SOMEWHAT FLAT ABOVE ALSO.

FIG. 111. SUN-DRIED SPECIMEN; THE DARK LINES DENOTE SMALL GROOVES, APPARENTLY MADE WITH A SMALL STICK.

FIG. 122. BAKED SPECIMEN; THE ORNAMENTED PORTIONS PROJECT FROM THE MAIN BODY; DECORATIONS IN DARK RED AND PALE RED.

FIG. 221. RUDELY SHAPED, FLAT-BOTTOMED, SUN-DRIED SPECIMEN.

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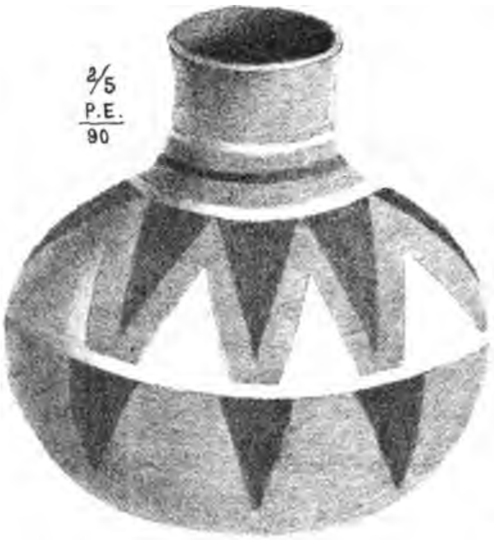

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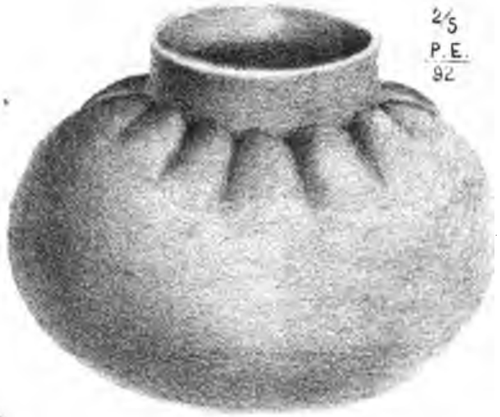

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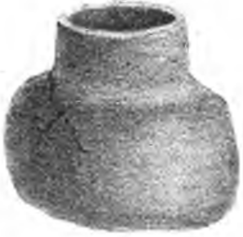

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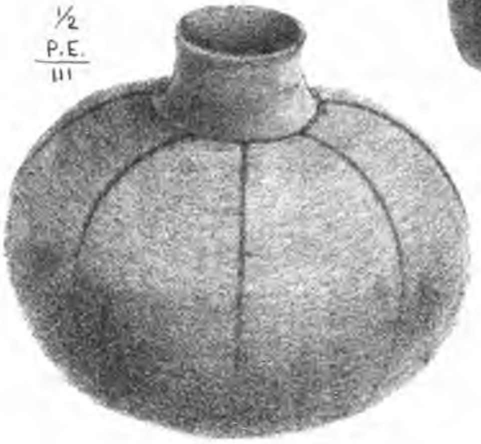

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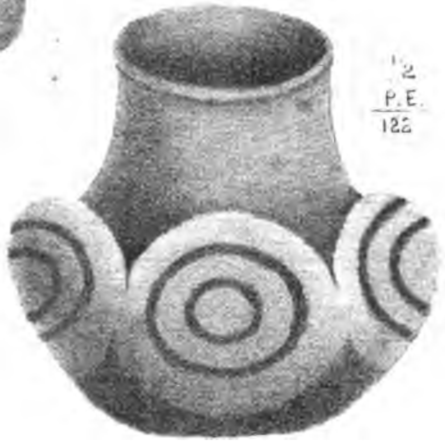

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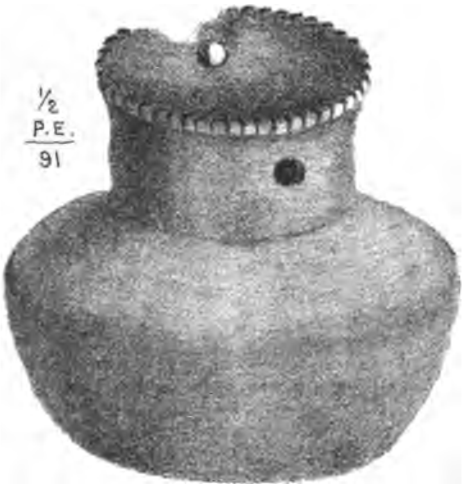

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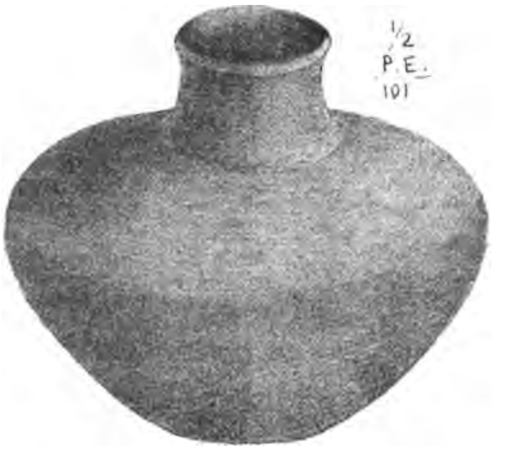

G. Hambach, fec.

A. Gast & Co. Lith.

PLATE VII.

FIG. 72. BLACK, SUN-DRIED SPECIMEN; FIGURE MOULDED IN THE CLAY OF THE BODY.

FIG. 79. BLACK, SUN-DRIED SPECIMEN; THE SURFACE OF THE BODY CONSISTS OF ALTERNATE RIDGES AND DEPRESSIONS WELL SHAPED AND MOULDED.

FIG. 85*a*. BLACK, SUN-DRIED SPECIMEN; THE NECK PROJECTS FROM THE BODY IN A MANNER SUGGESTING THE PROBABILITY OF ITS HAVING BEEN FASHIONED SEPARATELY AND SUBSEQUENTLY MOULDED UPON THE BODY. THERE IS AN INTERNAL LIP.

FIG. 85*b*. THE SAME—VIEWED FROM ABOVE, AND SHOWING THE INNER LIP.

FIG. 94. BAKED, FLESH-COLORED SPECIMEN; DECORATION IN RED, AND VERY BEAUTIFULLY AND SYMMETRICALLY PAINTED. A VERY PERFECT SPECIMEN.

FIG. 104. BLACK, SUN-DRIED SPECIMEN; HOLLOW FOOT; COMPRESSED BODY.

FIG. 121. SUN-DRIED SPECIMEN. ORNAMENTED BY FOUR RUDE FACES, FASHIONED SEPARATELY AND SUBSEQUENTLY ATTACHED.

FIG. 203. SUN-DRIED VESSEL; ELONGATED, FLAT-BOTTOMED BODY; LOWER HALF OF BODY IN ALTERNATE ELEVATIONS AND DEPRESSIONS, THE UPPER RIDGE INDENTED AT REGULAR INTERVALS.

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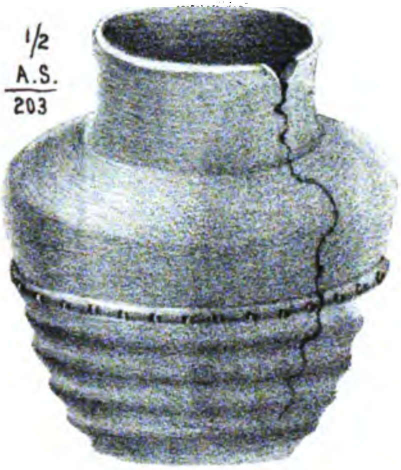

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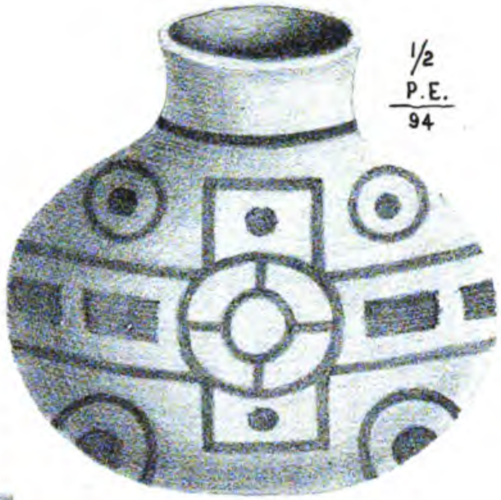

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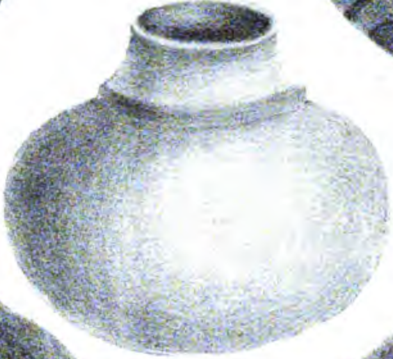

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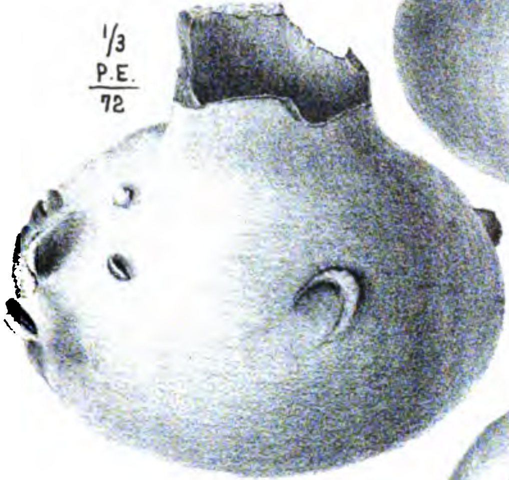

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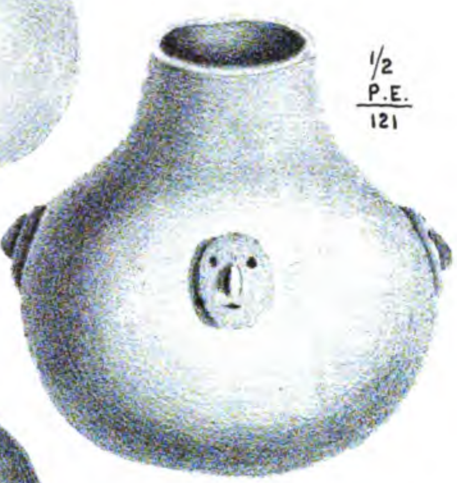

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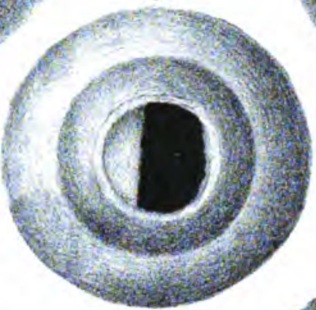

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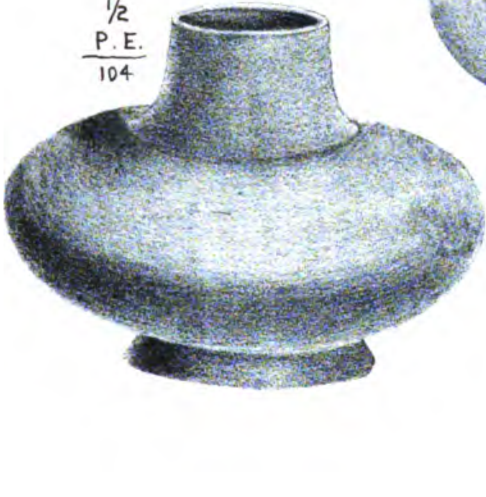

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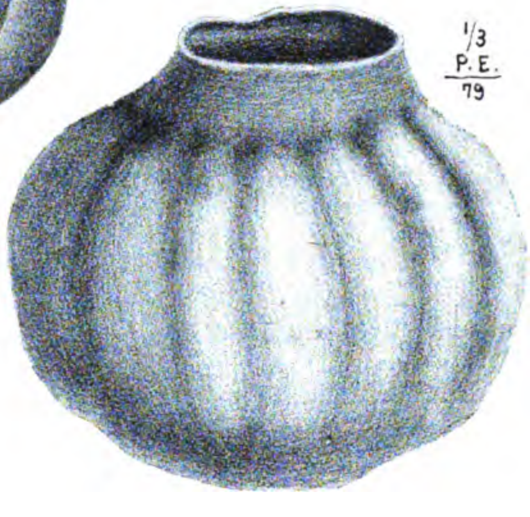

G. Hambach, fec.

A. Gast & Co. Lith.

PLATE VIII.

FIG. 1. A BEAUTIFUL SPECIMEN OF BAKED WARE; THE DECORATION IS PAINTED IN BRIGHT RED, BROWN AND WHITE.

FIG. 2. THIS IS ALSO A BAKED SPECIMEN; ITS COLOR IS PALE YELLOW AND THE DECORATION, VERY NEATLY EXECUTED, IS PAINTED IN RED AND WHITE.

FIG. 3. PLAIN, BLACK, SUN-DRIED SPECIMEN; VERY NUMEROUSLY REPRESENTED IN THE COLLECTIONS.

FIG. 4. THIS SPECIMEN WAS OBTAINED NEAR THE BOUNDARY OF ARKANSAS — IT IS DOUBTFUL WHETHER THIS VESSEL WAS BAKED OR NOT. ORIGINALLY THE VESSEL SEEMS TO HAVE BEEN PAINTED RED, THE LIGHTLY SHADED PORTION REPRESENTS A DEPRESSED FIELD PAINTED WHITE; THERE ARE THREE OF THESE FIELDS ON THE BODY OF THE VESSEL. TWO WHITE STRIPES ALSO ENCIRCLE THE NECK.

PLATE 8

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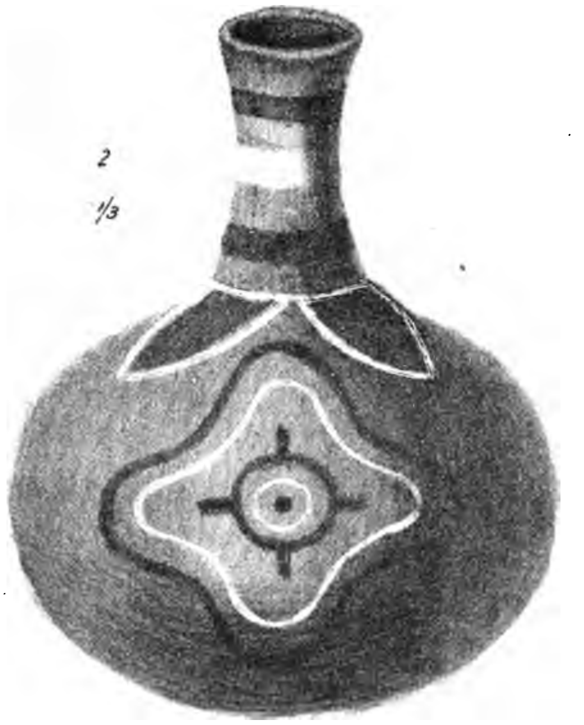

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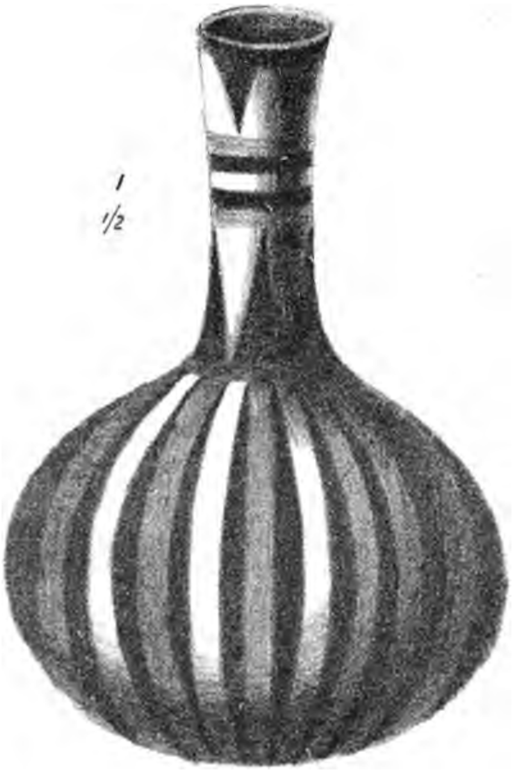

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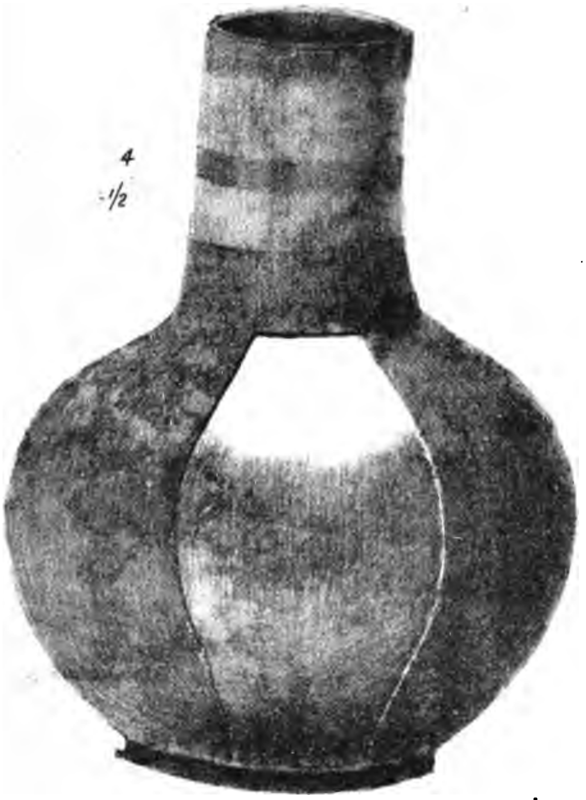

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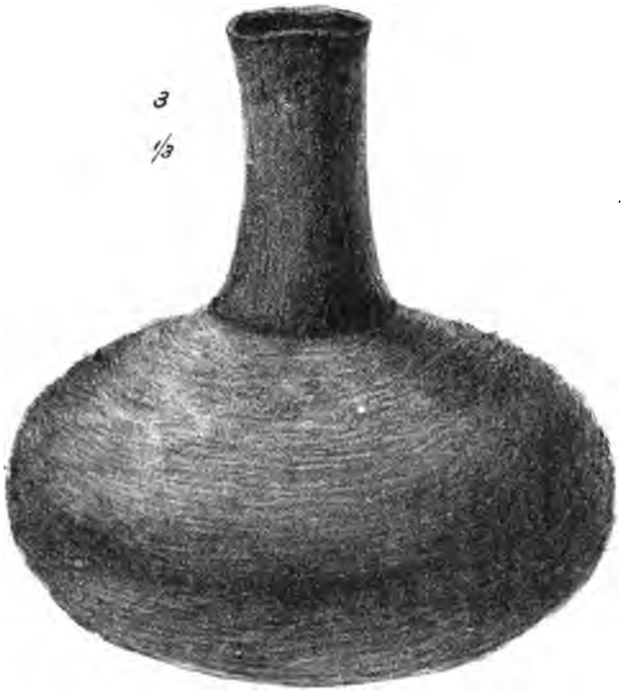


G. Hambach fec.

A. Gast & Co. Lith.

PLATE IX.

Fig. 1. One of the most remarkable specimens in the collection. Various opinions have been expressed as to the species of animal represented — some claiming that it represents an antediluvian animal, others going to the other extreme and claiming that the moulder's fancy has produced simply a caricature. The vessel is baked and of a yellowish color; the decorations are painted red and white.

Fig. 2. Baked specimen of yellowish color; the decoration consists of a white band crossed by red lines, as shown in the figure.

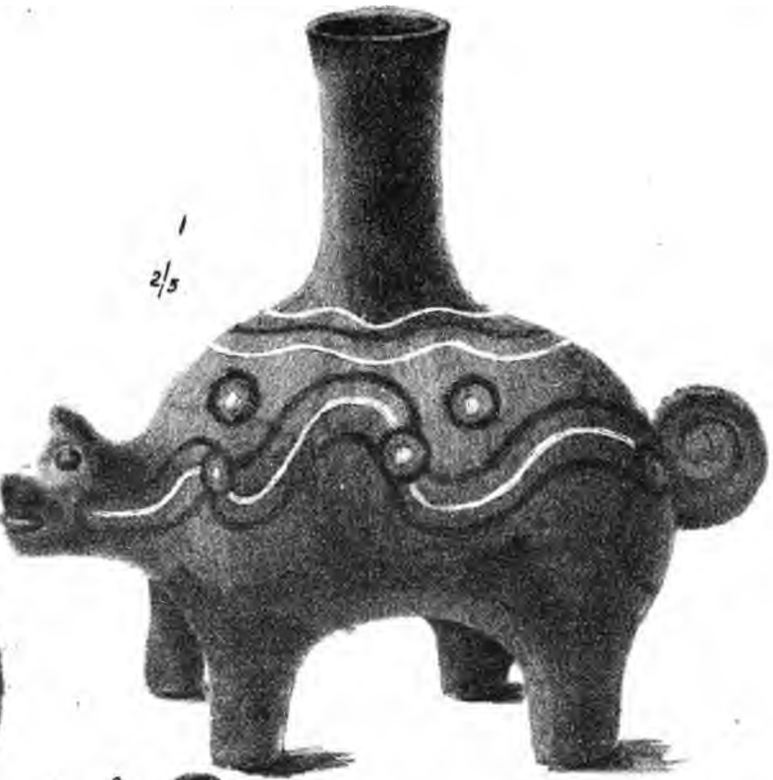
Fig. 3. The hollow head of a baked specimen; it has no resemblance to the head of figure 1. It is supposed to represent the head of a bat.

Fig. 4. A very neat specimen of baked ware; the color is a pale yellow, and the curves denoting the scales are painted in white.

Fig. 5. Fragments of a baked vessel; the decorations are painted in red and white.

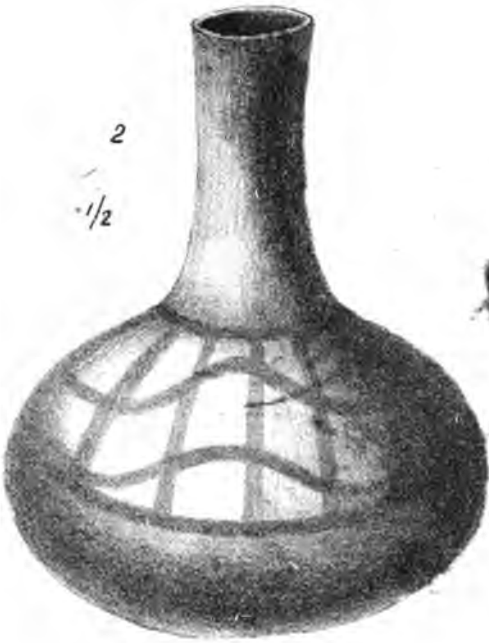
1

2/5



2

1/2



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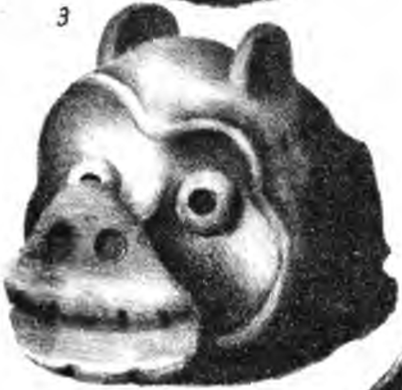

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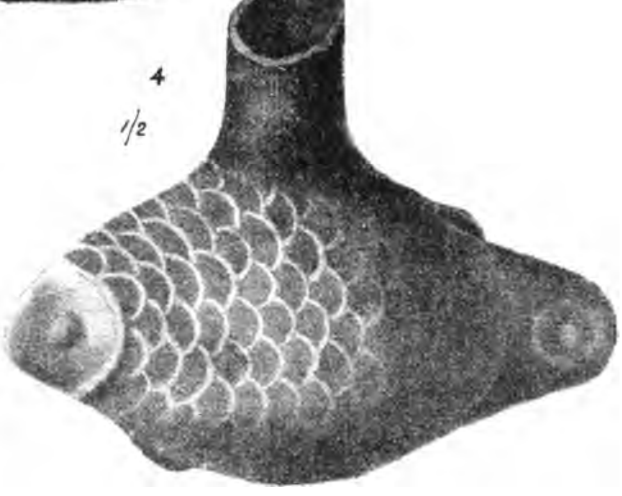
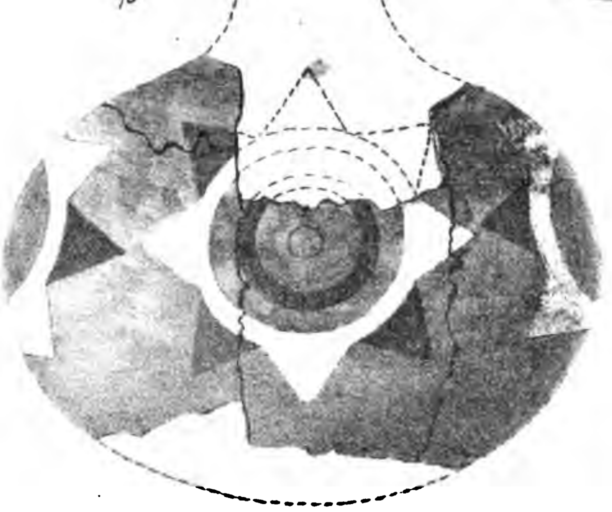
1/2



5

1/3

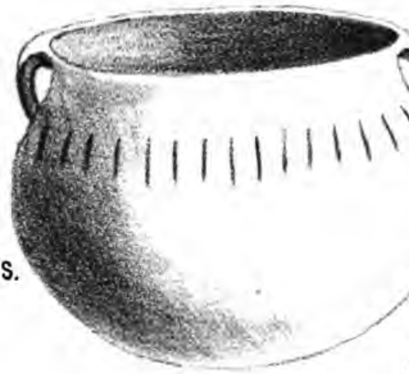


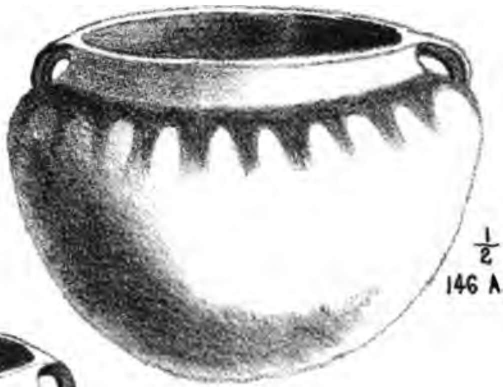
G. Hambach fec.

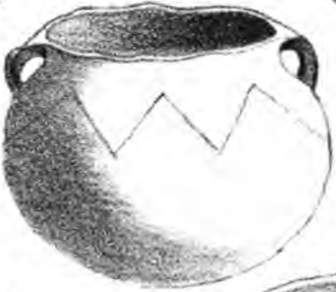
A. Gast & Co. Lith.

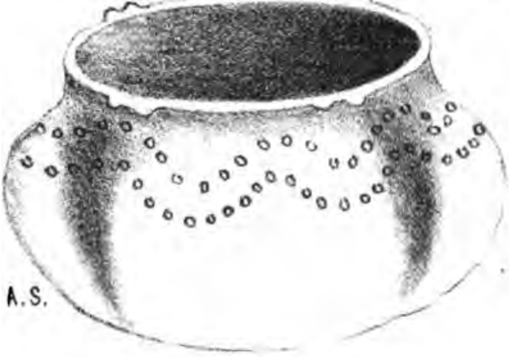
PLATE X.

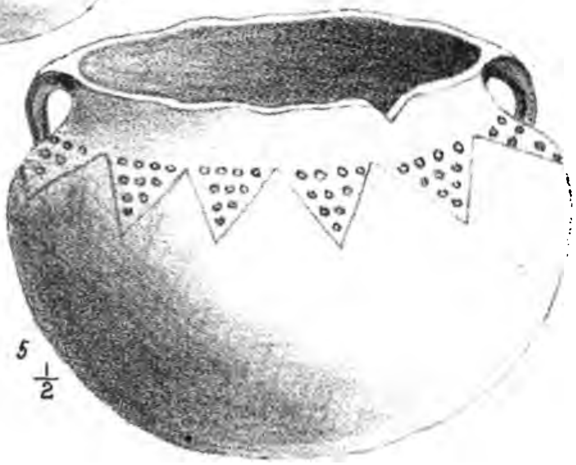
ALL OF THE SPECIMENS REPRESENTED ON THIS PLATE ARE SUN-DRIED; YET IN ALL OF THEM THE BOTTOM AND SOMETIMES ALSO THE SIDES GIVE EVIDENCE OF HAVING BEEN EXPOSED TO THE ACTION OF FIRE. IT HAS BEEN SUGGESTED, IN EXPLANATION OF THIS APPEARANCE, THAT THEY MAY HAVE BEEN USED AS COOKING UTENSILS. NONE OF THESE VESSELS ARE PAINTED; THEIR DECORATIONS CONSIST OF LINES OR SMALL DEPRESSIONS, APPARENTLY MADE WITH SOME SMALL SHARP INSTRUMENT AND VARIOUSLY ARRANGED, AS SEEN IN THE FIGURES.


1/2
152 A.S.


1/2
146 A.S.


1/2
159 A.S.


1/2
147 A.S.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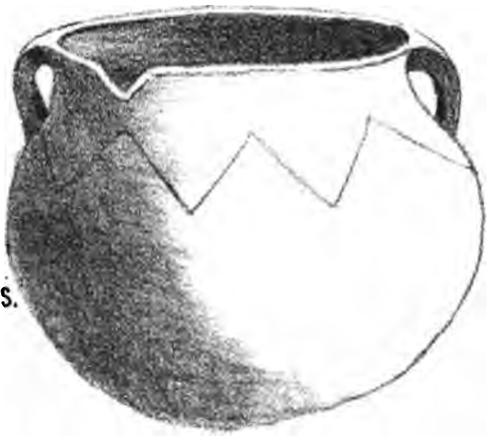
1/2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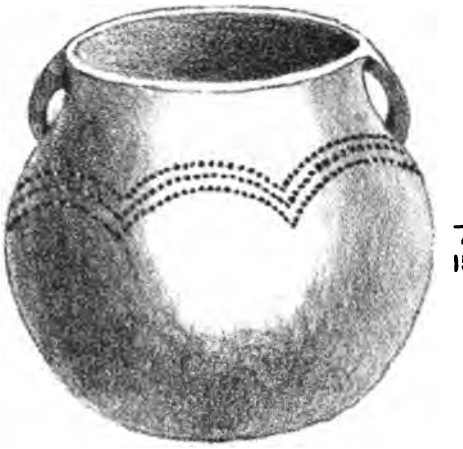
141 A.S.

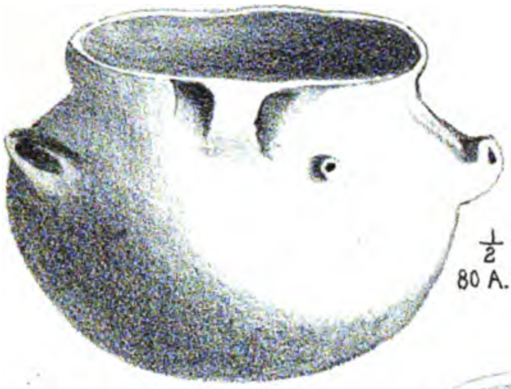

1/2
154 A.S.

G. Hambach, fec.

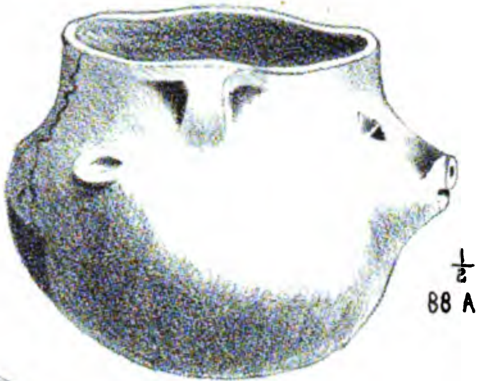
A. Gast & Co. Lith.

PLATE XI.

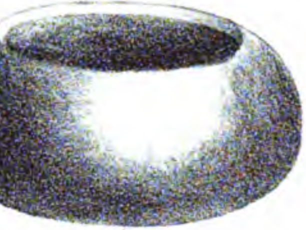
LIKE THE SPECIMENS REPRESENTED ON THE PRECEDING PLATE, ALL OF THESE ARE PLAIN, BLACK, SUN-DRIED VESSELS. FIGS. 80-88-158 HAVE THE APPEARANCE OF HAVING BEEN ON THE FIRE.



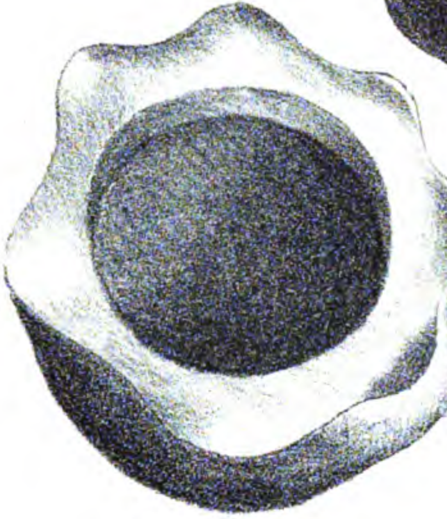
1/2
80 A.S.



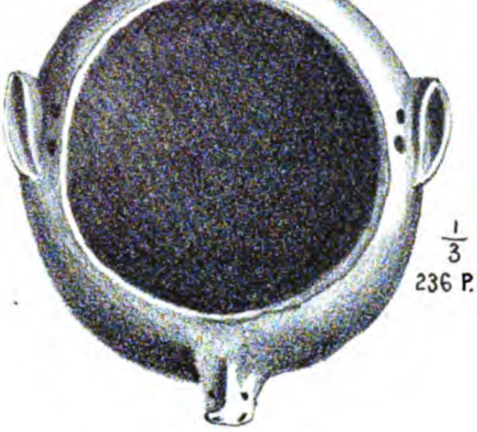
1/2
88 A.S.



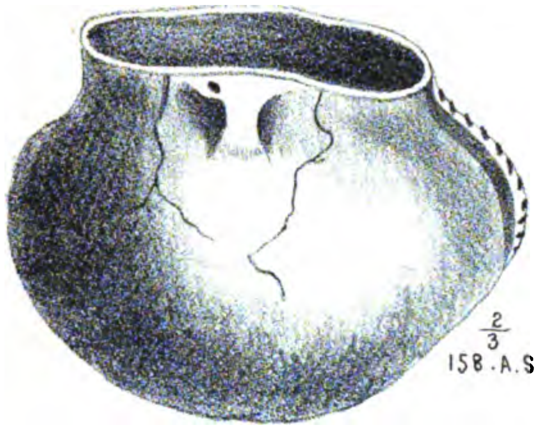
1/3
165 A.S.



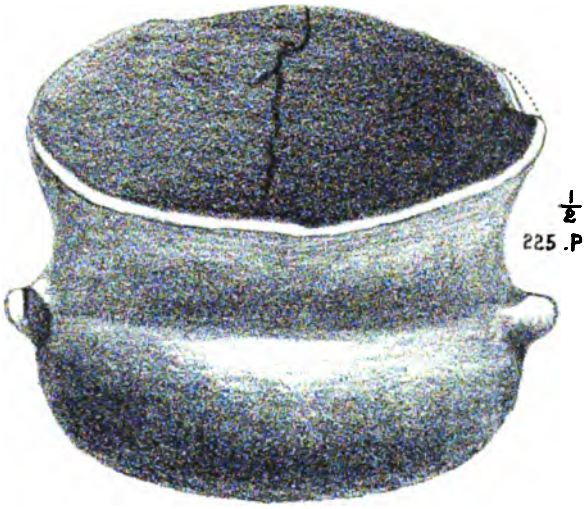
1/2
141 P.E.



1/3
236 P.E.



2/3
158 A.S.



1/2
225 P.E.

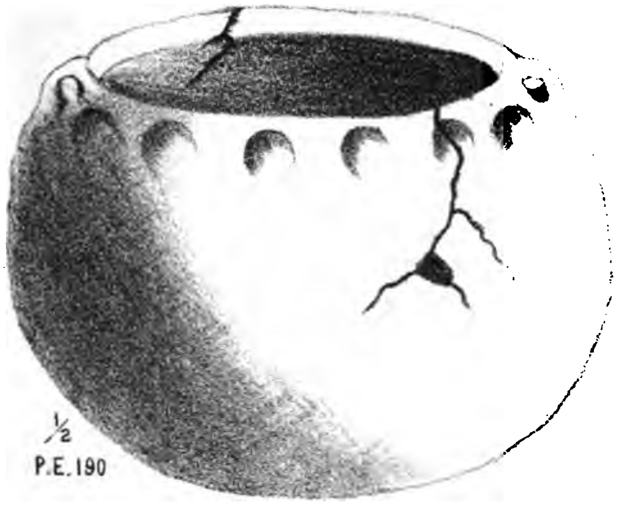
G. Hambach fec.

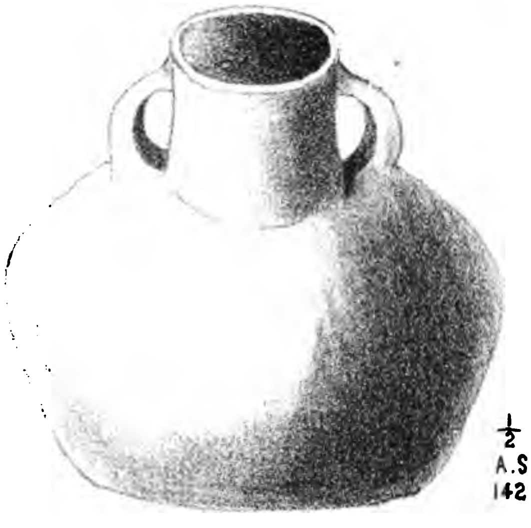
A. Gast & Co. Lith.

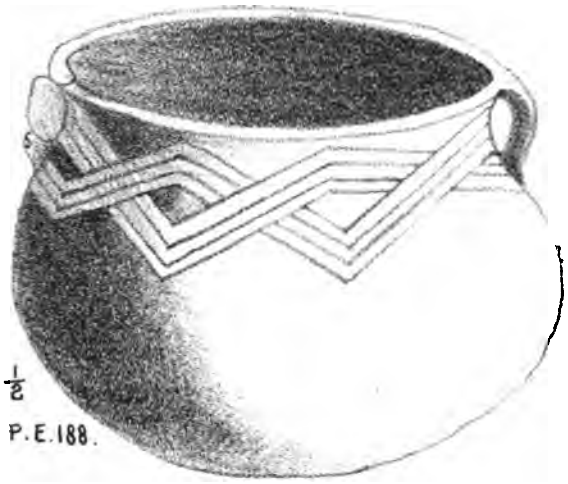
PLATE XII.

All of these specimens are sun-dried—but Figs. 184–190–206 are also slightly burnt. All of the vessels are black, there being no painting on any of them. The decorations consist of grooved lines or circles, made with a small stick or something similar. In Fig. 190 the decoration consists of a row of small, shallow depressions, while in Fig. 184 it consists of a number of projections, not very well shown in the drawing. The scallops of Fig. 206 meet at similar, small projections.

PLATE 12


½
P.E. 190


$\frac{1}{2}$
A.S.
142.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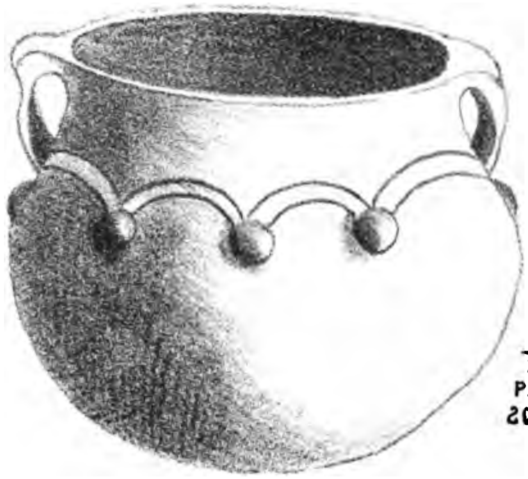
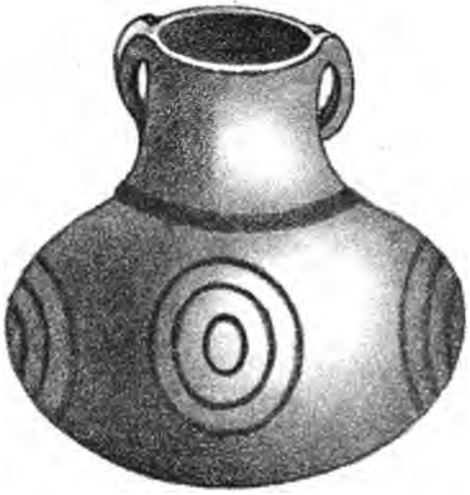
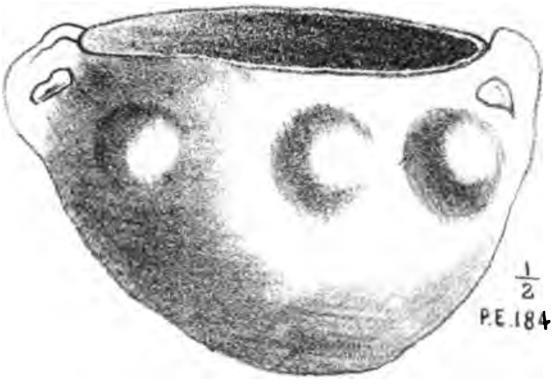
P.E. 188.


$\frac{1}{2}$
P.E.
206 x


$\frac{1}{2}$
A.S.
457


$\frac{1}{2}$
P.E. 184.

G. Hambach, fec.

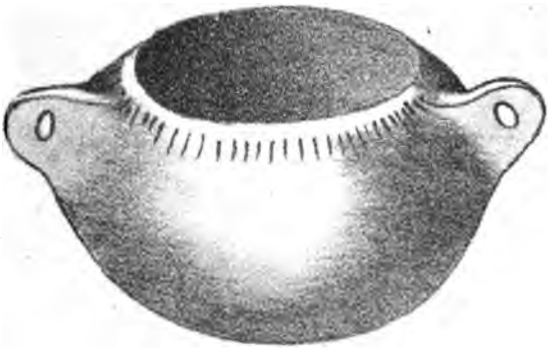
Lith. A. Gast & Co.

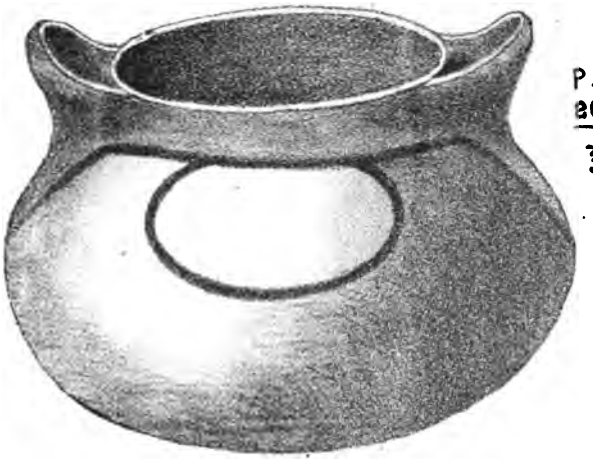
PLATE XIII.

THE SPECIMENS HERE REPRESENTED ARE ALL BLACK, SUN-DRIED VESSELS. WE FIND NO PAINTING ON ANY OF THEM, NOR ANY EVIDENCE OF THEIR HAVING BEEN NEAR THE FIRE. THE FIGURES OF ANIMALS IN FIG. 241 AND THE VESSEL JUST ABOVE ARE RATHER RUDELY EXECUTED.

PLATE 13.

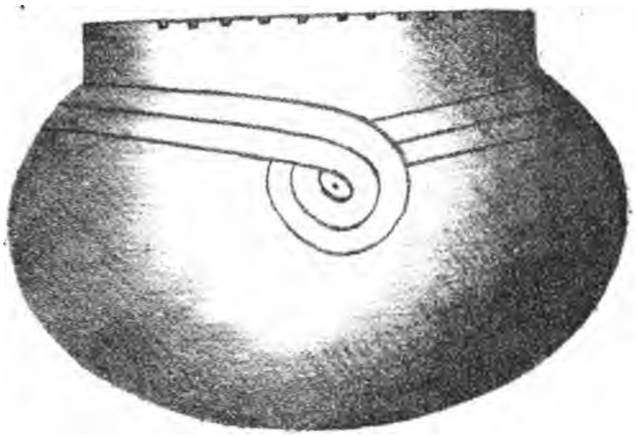
P.E.
$\frac{1}{3}$ – 295



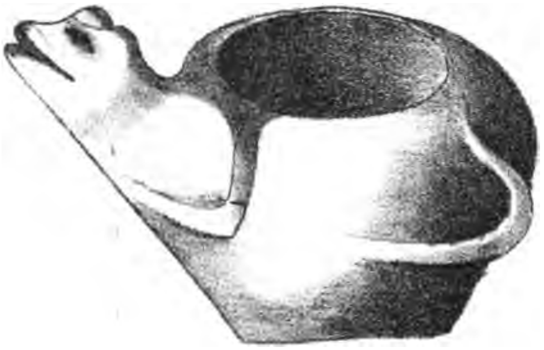


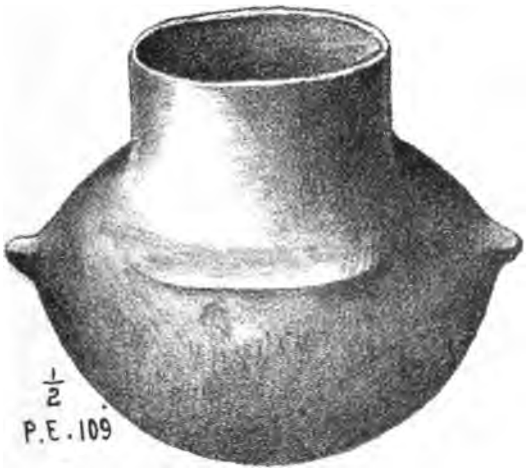
P.E.
265
$\frac{1}{3}$

P.E. 294.
$\frac{1}{8}$

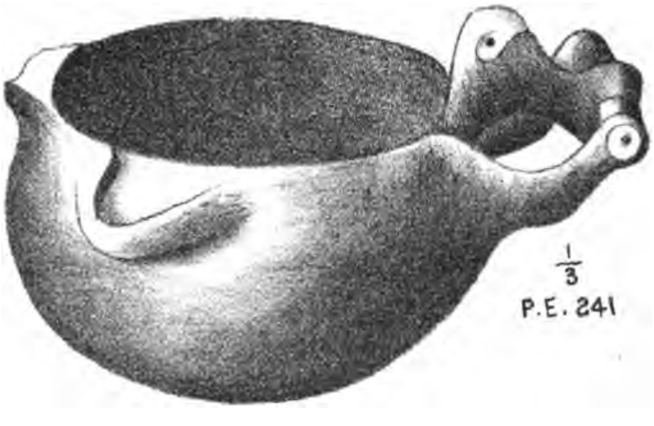


P.E. $\frac{2}{3}$





$\frac{1}{2}$
P.E. 109



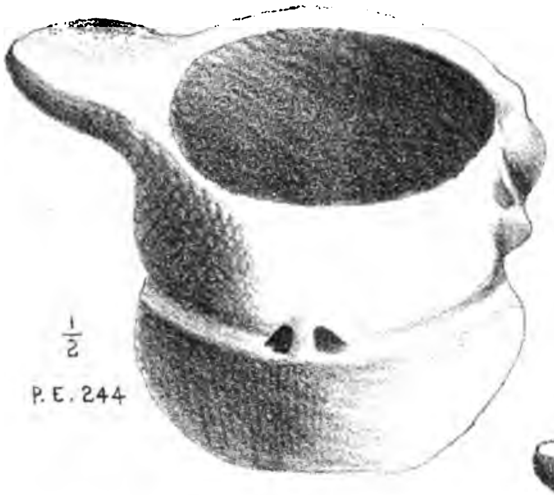
$\frac{1}{3}$
P.E. 241

G. Hambach, fec.

A. Gast & Co. Lith.

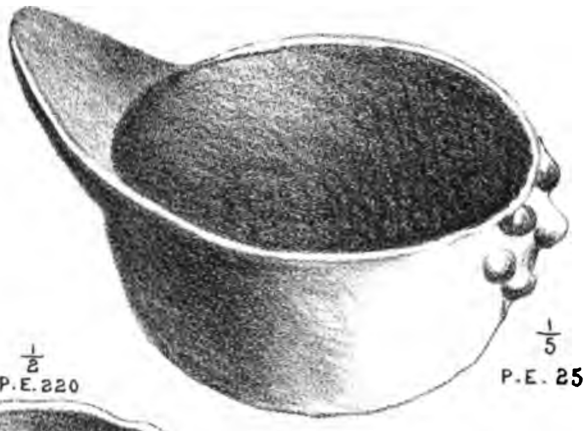
PLATE XIV.

ALL SUN-DRIED SPECIMENS; PLAIN BLACK; THE LITTLE PROTUBERANCES IN FIGS. 85-244-246-250 ARE EVIDENTLY INTENDED TO REPRESENT SOME SIGNIFICANT FIGURE, BUT THE EXECUTION IS TOO RUDE AND IMPERFECT TO INDICATE ITS CHARACTER.



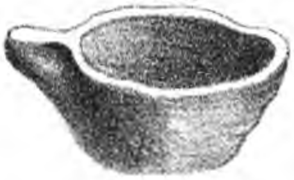
$\frac{1}{2}$

P. E. 244



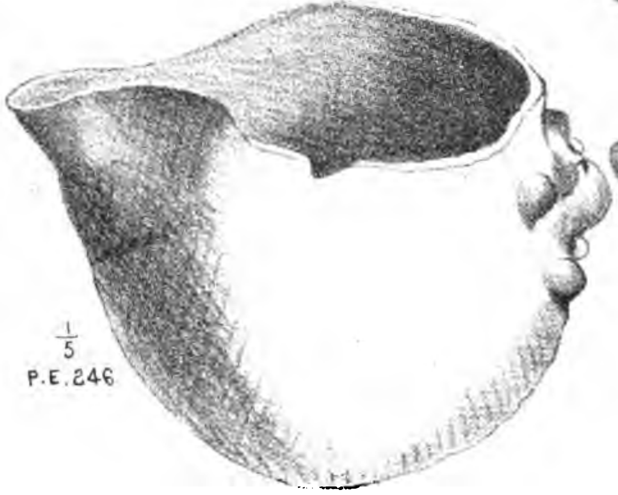
$\frac{1}{5}$

P. E. 250



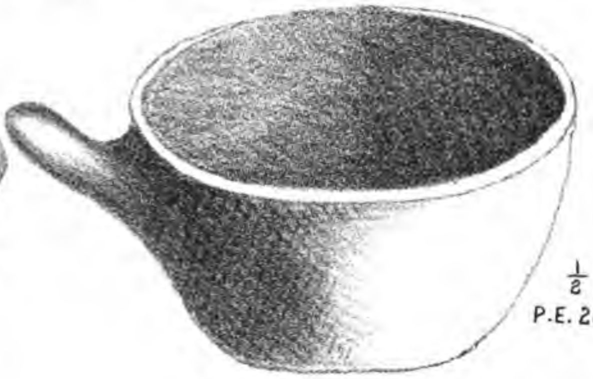
$\frac{1}{2}$

P. E. 220



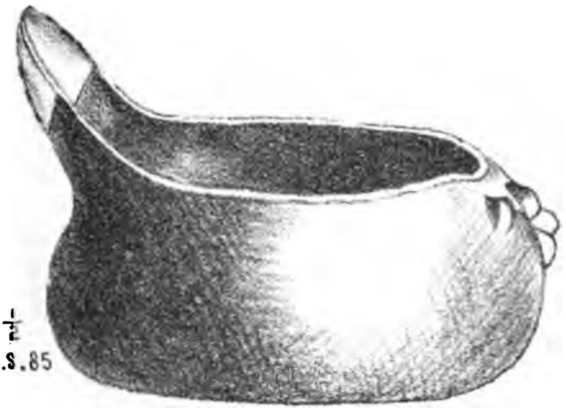
$\frac{1}{5}$

P. E. 246



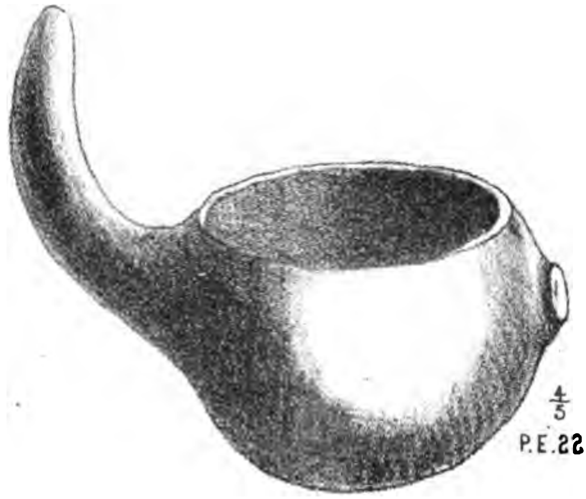
$\frac{1}{2}$

P. E. 229



$\frac{1}{2}$

A. S. 85



$\frac{4}{5}$

P. E. 228

G. Hambach. fec.

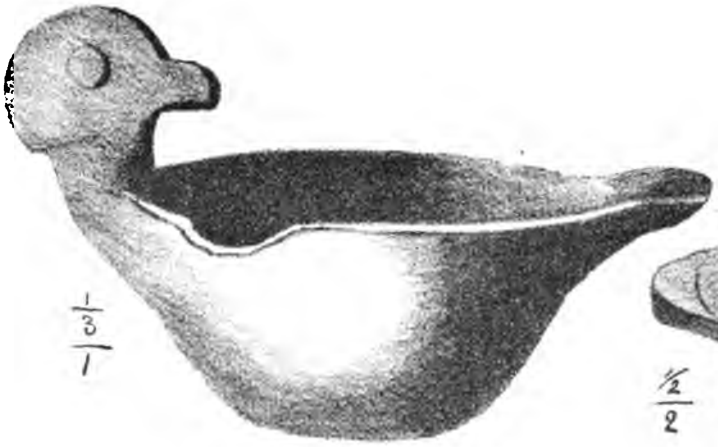
LITH. A. GAST & CO.

PLATE XV.

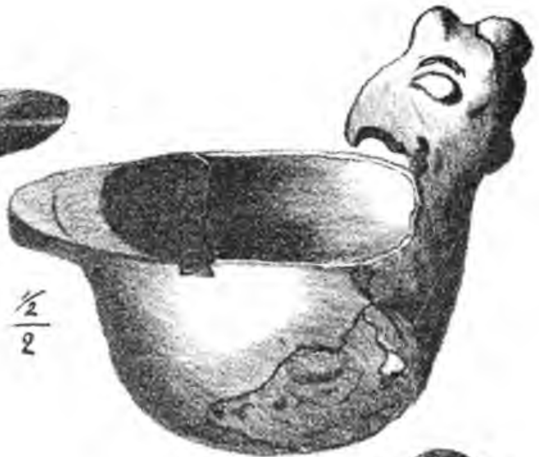
THE VESSELS REPRESENTED ON THIS PLATE EXCEPT FIG. 6 ARE AMONG THE MOST INTERESTING SPECIMENS THAT HAVE BEEN DISCOVERED IN THIS REGION. THEIR PECULIAR SHAPE AND THE BROAD, FLAT LIP HAVE LED TO THE SUPPOSITION THAT THEY WERE USED AS LAMPS. SHOULD WE DISCOVER ANY PROOF THAT THEY WERE USED AS SUCH, THEY WILL BECOME HIGHLY VALUABLE SPECIMENS IN EVERY COLLECTION AS ANOTHER EVIDENCE OF THE SOCIAL ADVANCE OF THEIR MAKERS. THEY ARE ALL BLACK, SUN-DRIED SPECIMENS WHICH GIVE NO EVIDENCE OF HAVING BEEN NEAR THE FIRE. IN NEARLY ALL OF THEM THE HANDLE IS MOULDED INTO THE SHAPE OF SOME ANIMAL OR AT LEAST IT REPRESENTS THE HEAD OF ONE, THOUGH IN SUCH AS RESEMBLE FIG. 4, IT IS DIFFICULT TO TELL WHAT IT DOES REPRESENT. IN THE MAJORITY OF THE SPECIMENS, THE "NOSE" IS BROAD, FLAT AND UNADORNED, AS IN FIGS. 2-3-4; IN A FEW THE NOSE IS DRAWN OUT TO FORM A WELL-GROOVED LIP, AS IN FIG. 1; AND IN FIG. 5, NOT ONLY DOES THE HANDLE REPRESENT A SMALL BIRD, BUT THE NOSE TOO IS ORNAMENTED, BY HAVING A SNAKE COILED ABOUT IT, THE POETIC INTERPRETATION OF WHICH IS "A SNAKE CHARMING A BIRD."

FIG. 6 IS A BLACK, SUN-DRIED SPECIMEN, THE BODY OF WHICH IS SUPPOSED TO REPRESENT A FROG (?).

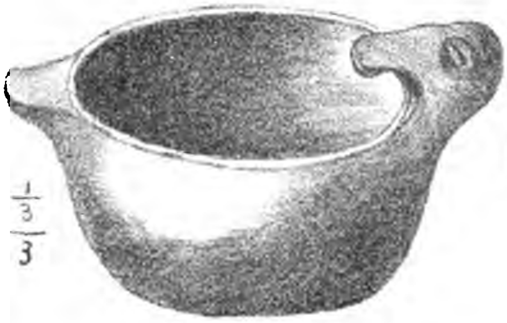
PLATE 15.



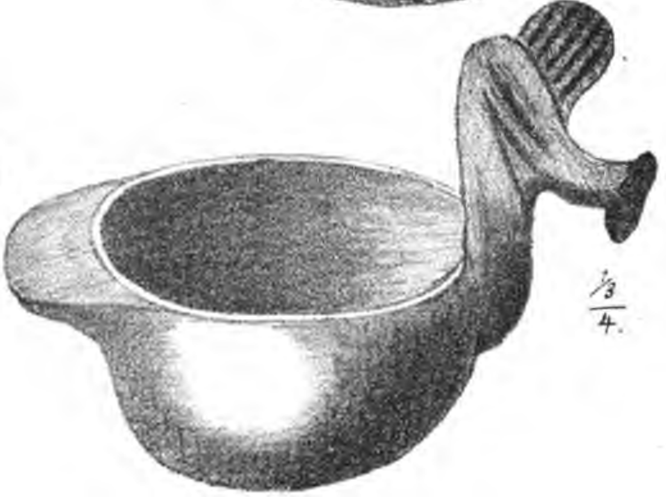
1/3
1



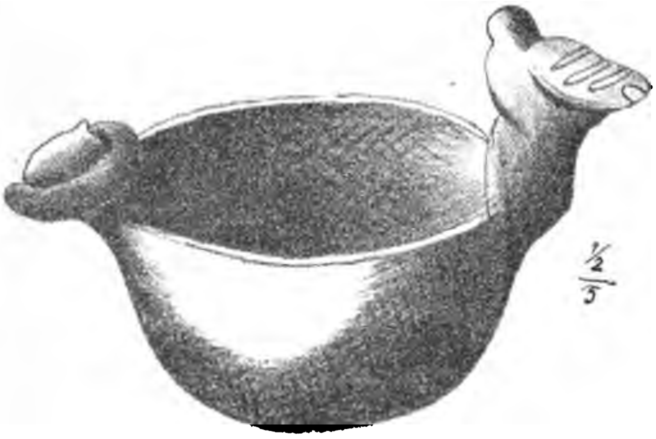
1/2
2



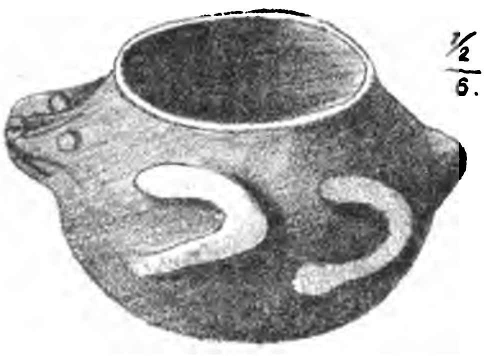
1/3
3



1/3
4.



1/2
5



1/2
6.

G. Hambach, fec.

A. Gast & Co. Lith.

PLATE XVI.

Fig. 1. Black, sun-dried specimen; the body very irregular and representing the rude outlines of an animal, probably a turtle.

Fig. 2. Black, sun-dried specimen; two handles; body representing a frog.

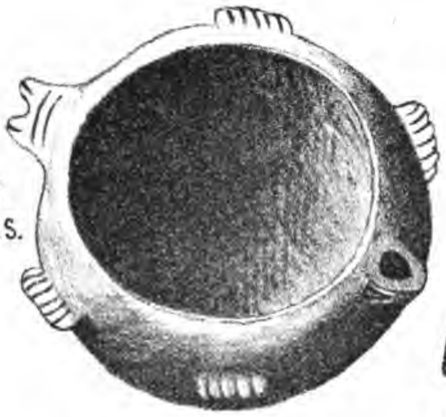
Fig. 76. Very neat, sun-dried specimen representing a fish.

Fig. 133. A head which probably formed the handle of some specimen like Fig. 3, plate 23. It is black and sun-dried. The peculiar head-dress was probably fashioned separately and then applied, but fits very closely. The head is hollow and contains some pellets.

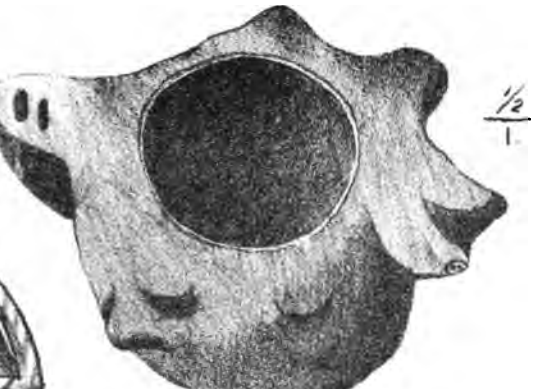
Fig. 292. Black, sun-dried specimen. The rim projects a little and is decorated with grooved lines, giving it the appearance of a rope. The upright handle is probably intended to represent the head of some animal of which the flat, horizontal handle is the tail, but the resemblance can not be traced to any known form.

Fig. 422. (Left). A sun-dried specimen of peculiar shape. As shown in the figure one-half the body is larger than the other and more curved, giving to the whole the appearance of a shell.

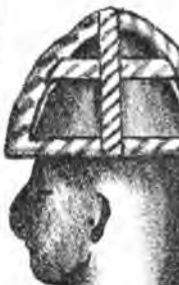
Fig. 422. (Right) Black, sun-dried specimen.



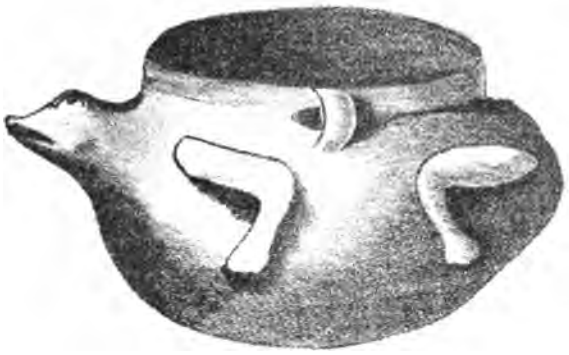
1/2
76 A.S.

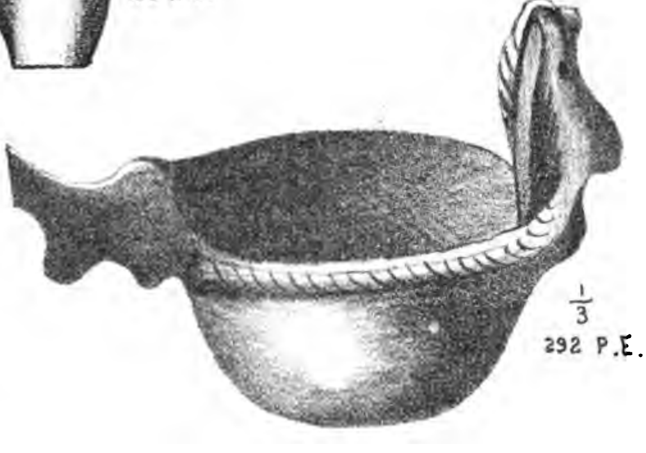


1/2
1.

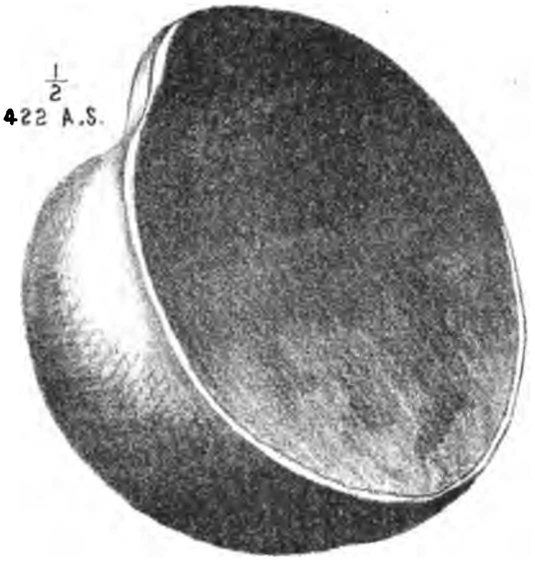


1/2
133 A.S.

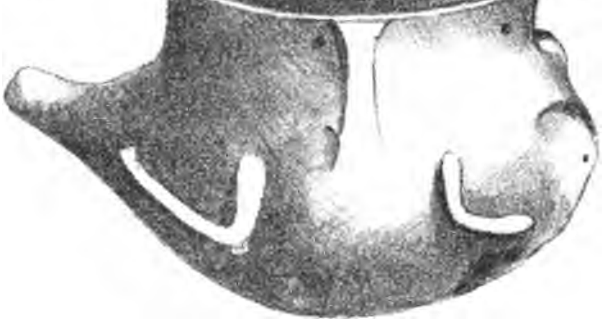




1/3
292 P.E.



1/2
422 A.S.



1/2
422 A.S.

G. Hambach, fec.

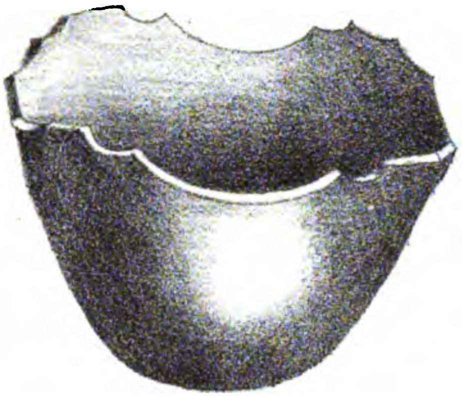
A. Gast & Co. Lith.

PLATE XVII.

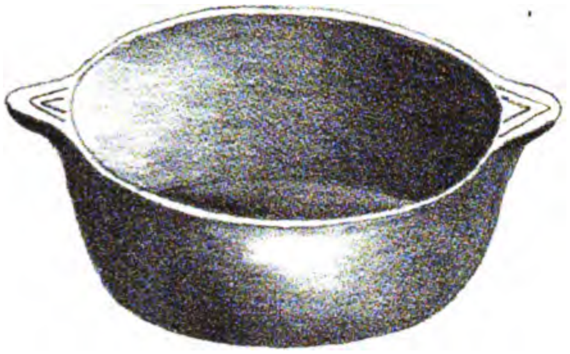
This plate shows the various forms of shallow vessels represented in our collections. With the exception of fig. 173, they are all black, sun-dried specimens, whose only ornamentations consist in the peculiar shape given to the rim. The square form of fig. 342 is extremely rare. Fig. 173 is painted red inside and outside; it is doubtful whether it is baked or not.

PLATE 17.

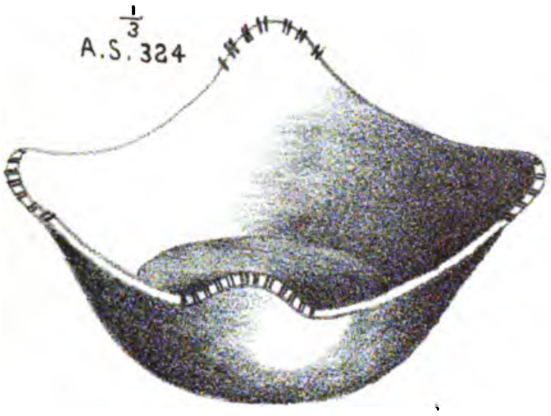
$\frac{1}{3}$ – A.S. 90.



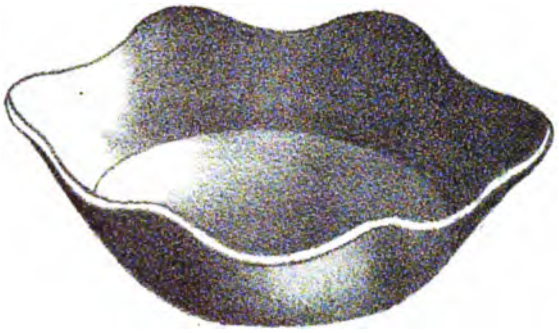
$\frac{1}{2}$ – A.S. 466



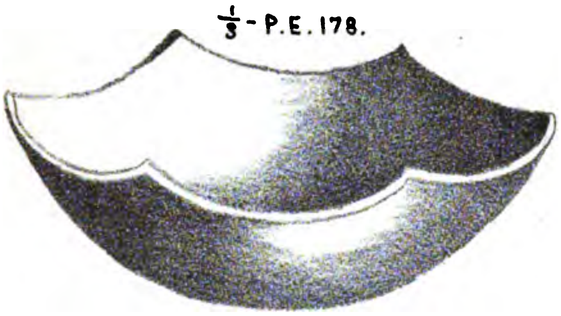
$\frac{1}{3}$ A.S. 324



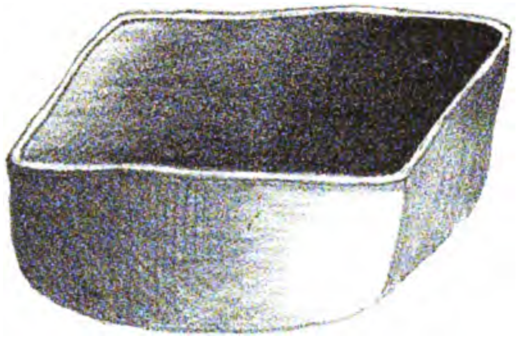
$\frac{1}{3}$ – A.S. 322



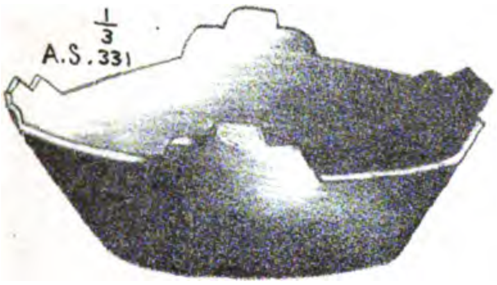
$\frac{1}{3}$ – P.E. 178.

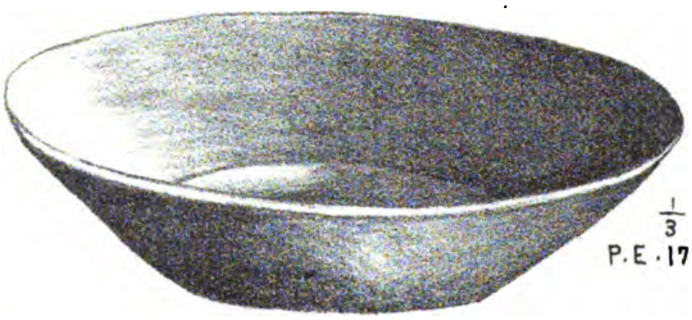


$\frac{1}{3}$ – A.S. 342.



$\frac{1}{3}$ A.S. 331





$\frac{1}{3}$ P.E. 173

G. Hambach, fec.

A. Gast & Co. Lith.

PLATE XVIII.

Upper right hand fig. Sun-dried specimen; the decoration is painted in red. In this vessel a quantity of red powder was fonnd, supposed to have been the paint used in painting the decorations.

Fig. 2. This is a rare specimen. It is baked and of unusual size.

Lower right hand fig. A plain, sun-dried specimen. The mouth of the vessel is in the back of the head of the figure.

Fig. 341. Upper left hand. One of the very few specimens that have any decoration on the inside. It is a black, sun-dried specimen, and the decoration simply consists of grooved, concentric semicircles made with some small instrument.

Middle left hand fig. This specimen was obtained from the state of Arkansas, near the boundary. It is doubtful whether it has been near the fire or not. The vessel is painted red.

Lower left hand fig. Black, sun-dried specimen supposed to represent an owl (!). Like the majority of such vessels, it has the mouth of the vessel in the back of the head.

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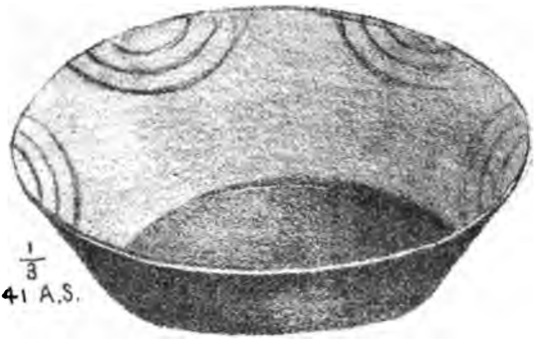

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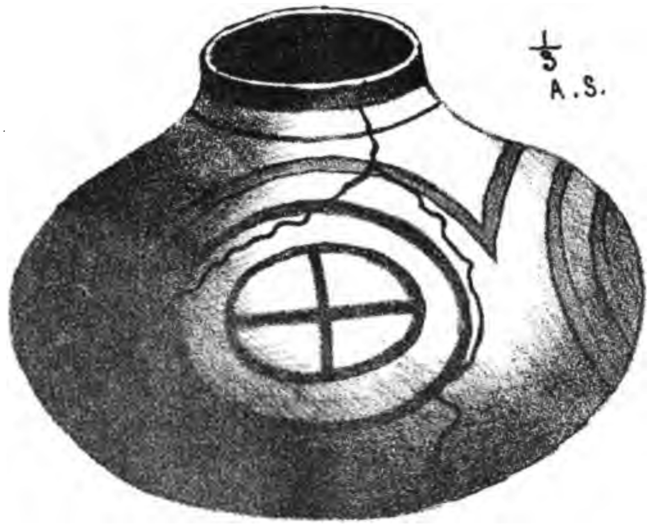
341 A.S.



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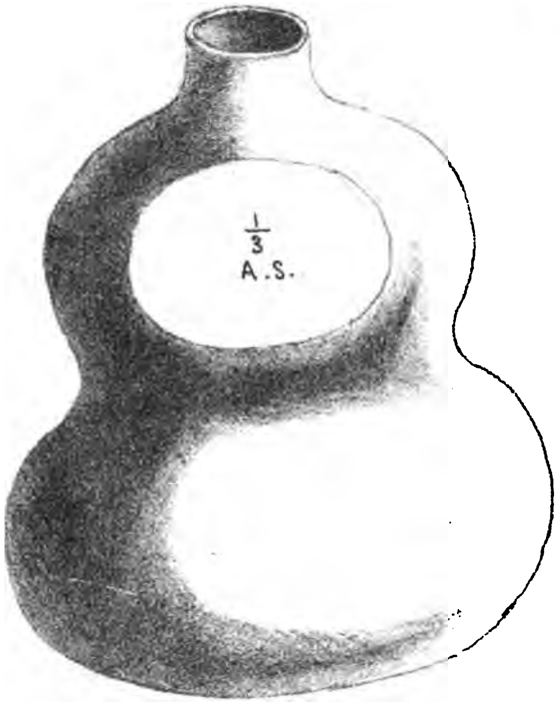

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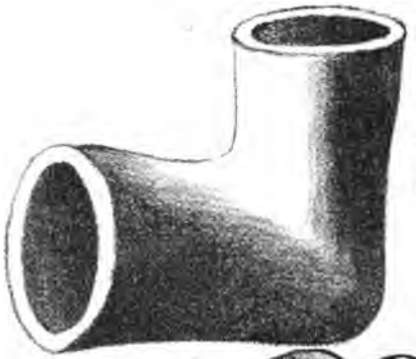
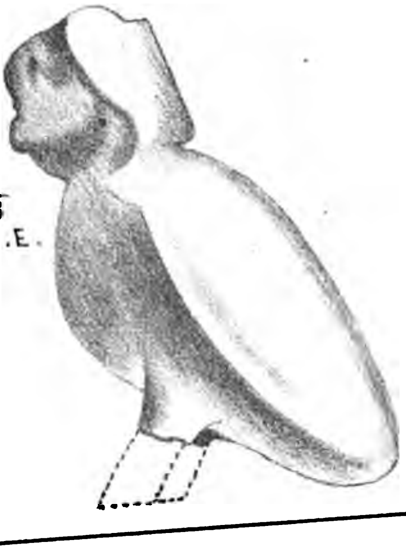


$\frac{1}{2}$
P.E. 2.



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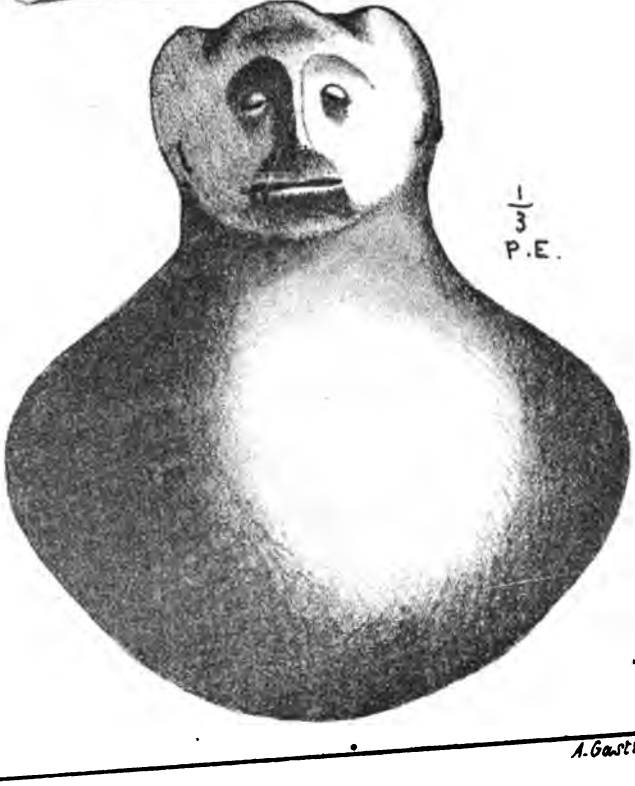


$\frac{1}{3}$
P.E.

A. Gast & Co. Lith.

G. Hambach, fec.

PLATE XIX.

FIG. 1. A BAKED SPECIMEN THE PRESENT COLOR OF WHICH IS GREY, BUT WHICH SEEMS ORIGINALLY TO HAVE BEEN BROWN. THE WINGS AND THE ROUND SPOTS ON THE BODY ARE PAINTED WHITE.

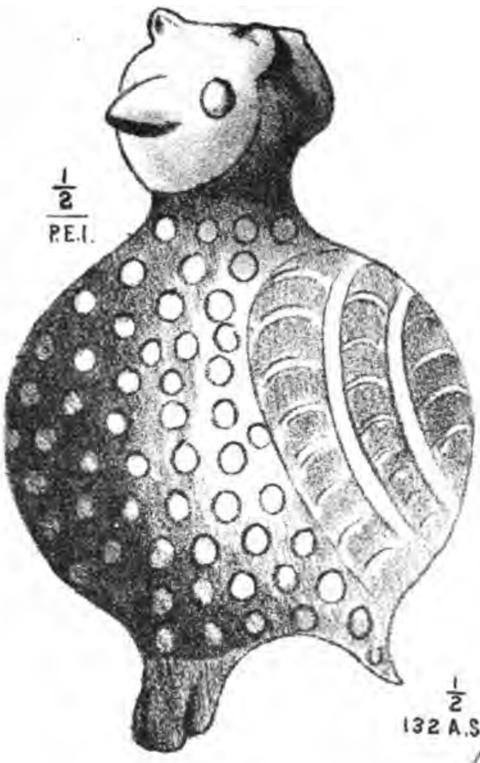
FIG. 132. BLACK, SUN-DRIED SPECIMEN. THE HEAD IS HOLLOW AND CONTAINS A NUMBER OF PELLETS. IT WAS PROBABLY AT ONE TIME THE HANDLE OF A LAMP.

FIG. 277. A PLAIN SUN DRIED SPECIMEN, THE HEAD OF WHICH IS SUPPOSED TO REPRESENT THE HEAD OF A FOX.

FIG. 455. SUN-DRIED SPECIMEN. THE NECK IS SUPPOSED TO BE AN IMITATION OF AN OWL'S HEAD, WHILE THE BODY IS PROBABLY INTENDED TO REPRESENT A FROG.

FIG. 459. IN THIS FIGURE THE ZIGZAG LINE IS DRAWN A LITTLE TOO REGULARLY. IN THE ORIGINAL THE LINES SEEM TO BE MORE IN THE SHAPE OF THE OUTLINES OF A LEAF. THE LINES ARE GROOVED; THE SPECIMEN IS BLACK AND SUN-DRIED.

PLATE 19.



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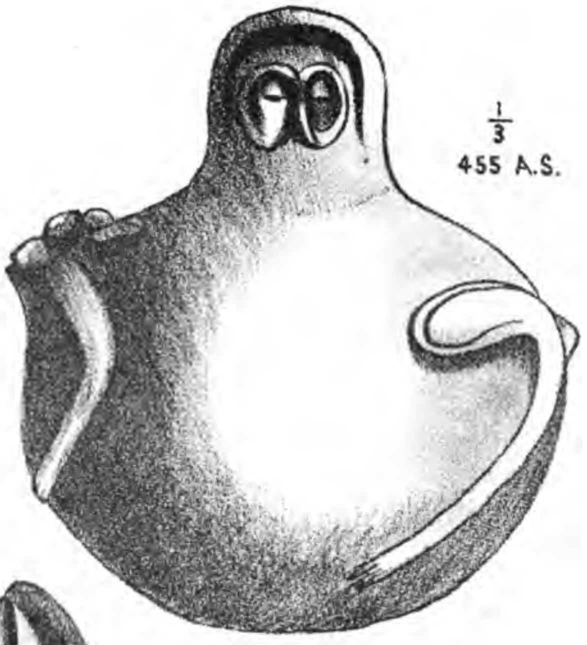

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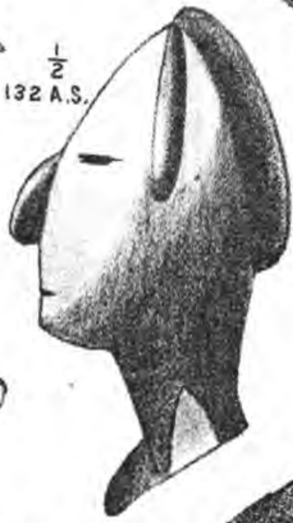
455 A.S.



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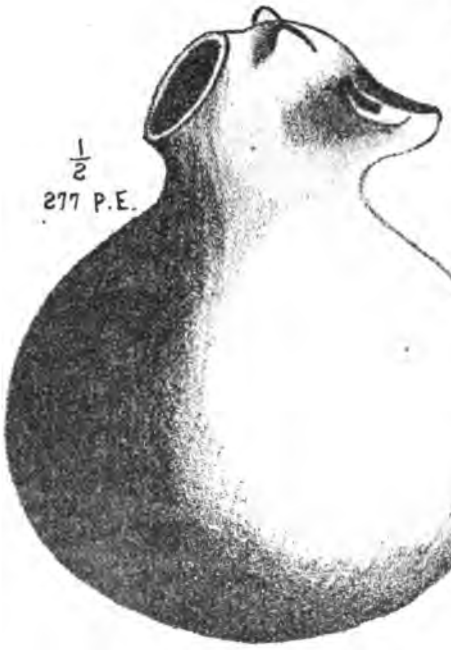
132 A.S.



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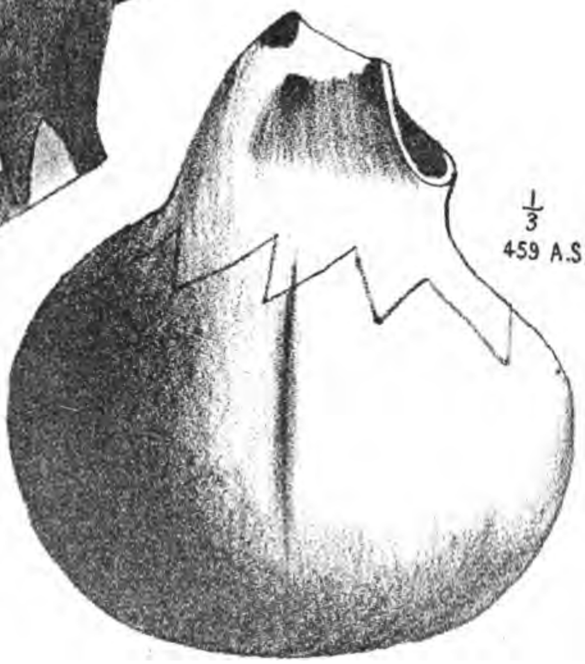
277 P.E.



$\frac{1}{3}$
459 A.S.

G. Hambach, fec.

A. Gast & Co. Lith.

PLATE XX.

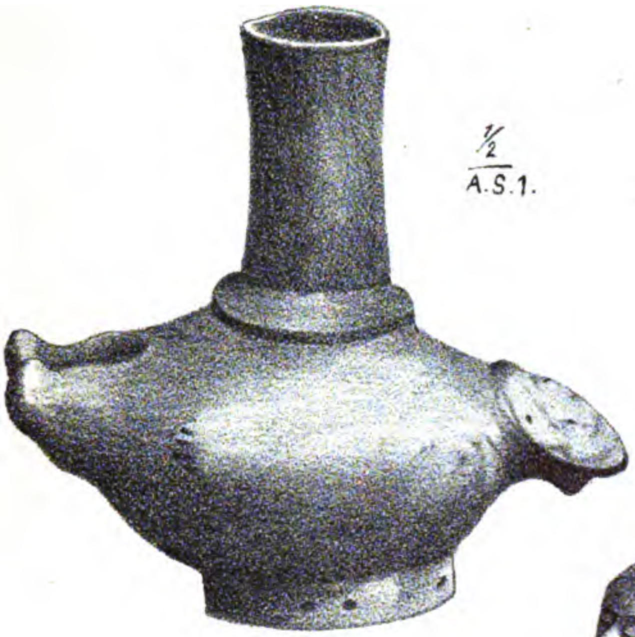
FIG. 1. A very unique specimen. The figure is rather rudely outlined but the vessel itself presents a very handsome appearance. It is a sun-dried specimen. The foot is hollow and perforated with a number of holes.

FIG. 2. A black, two-necked bottle, apparently; the face shown in the figure is imperfectly moulded; directly opposite to it on the reverse side is the mouth of the vessel. The specimen is sun-dried.

FIG. 3. This specimen is peculiar in this that it has the mouth placed on one side, and in having the figure double, there being a similar figure and face on the reverse side as on the side shown in the drawing. Sun-dried specimen.

FIG. 4. A very peculiarly shaped pipe; the foot is hollow as far up as the arms of the figure and the opening is such as to suggest the idea that it was intended for the reception of a stick on which the pipe was carried.

FIG. 5. Black, sun-dried specimen. The decoration is the same on the reverse side as on the side shown in the picture.



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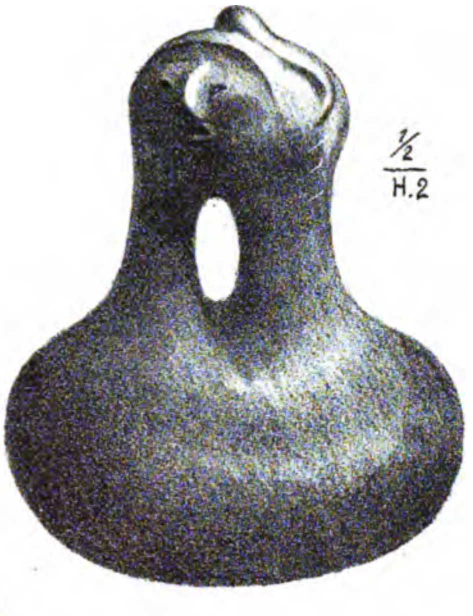
A.S.1.



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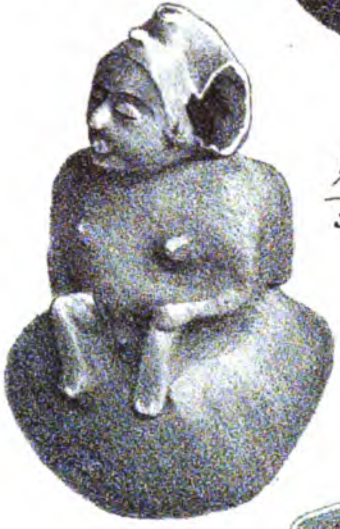

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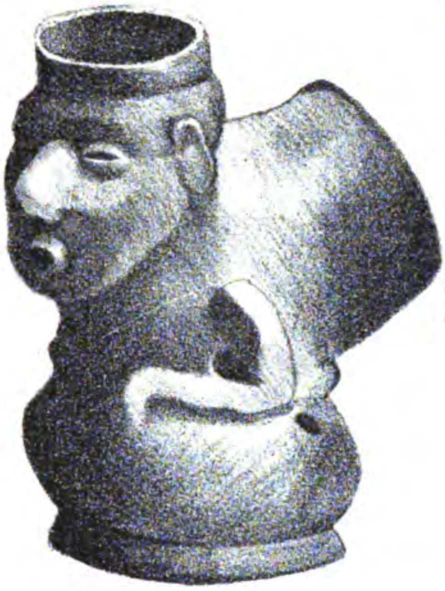
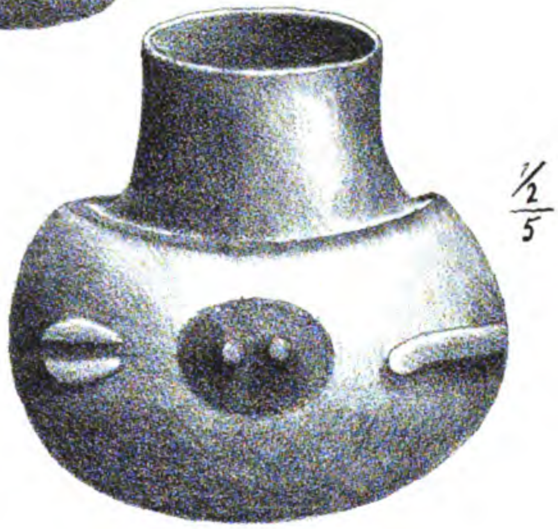


L.4.



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G. Hambach, fec. A. Gast & Co. Lith.

PLATE XXI.

ALL OF THE VESSELS HERE REPRESENTED ARE BLACK, SUN-DRIED SPECIMENS; WHILE EACH VESSEL DIFFERS FROM THE REST IN SOME MANNER THEY ALL HAVE THE MOUTH PLACED IN THE BACK OF THE HEAD OF THE FIGURE REPRESENTED. THE FIGURES THEMSELVES CAN BE BETTER UNDERSTOOD BY A CLOSE EXAMINATION OF THE PLATES THAN BY ANY DETAILED DESCRIPTION IN WORDS.

PLATE 21.

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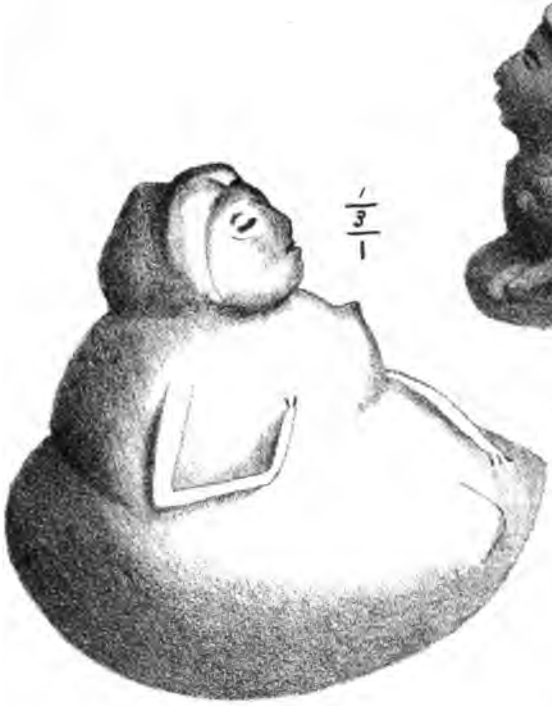

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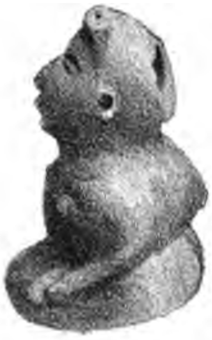

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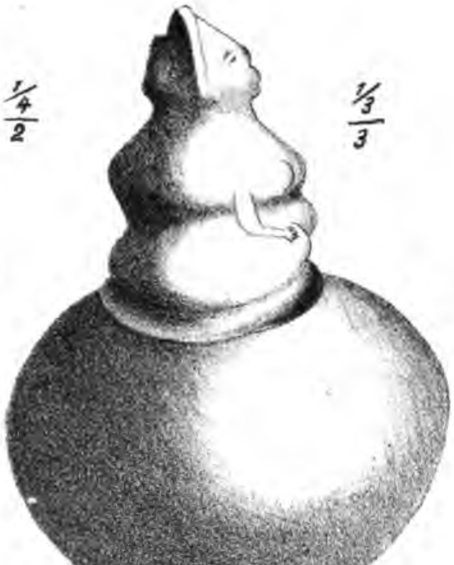

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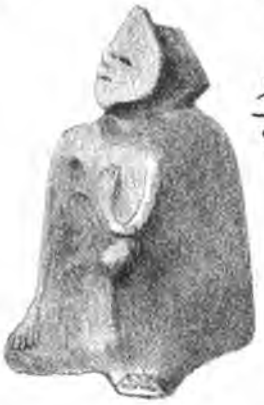

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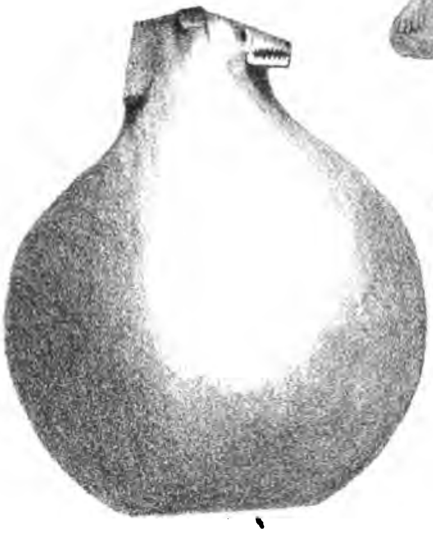

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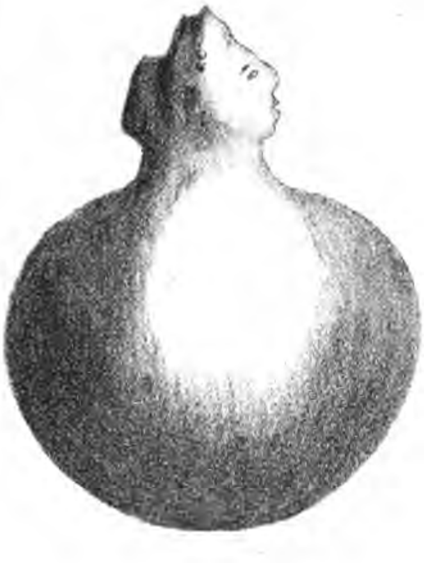

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A. Gast & Co. Lith.

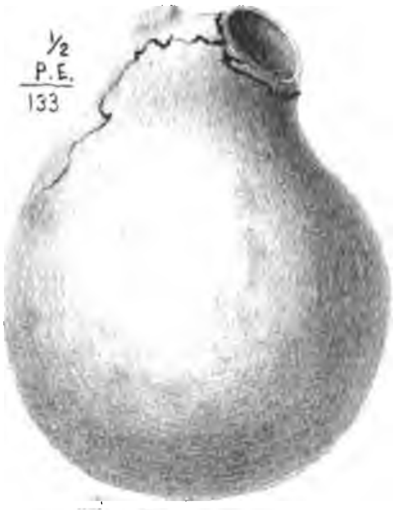
G. Hambach, fec.

PLATE XXII.

FEW SPECIMENS IN OUR COLLECTIONS ARE AS BEAUTIFUL AS THOSE REPRESENTED IN THIS PLATE. THE DESIGN, THOUGH VERY SIMPLE AND APPARENTLY AN IMITATION OF THE GOURD, IS NEATLY EXECUTED IN ALL, AND THE VESSELS THEMSELVES, THOUGH ALL BLACK AND SUN-DRIED, ARE WELL FINISHED THROUGHOUT.

PLATE 8.

1/2
P.E.
133



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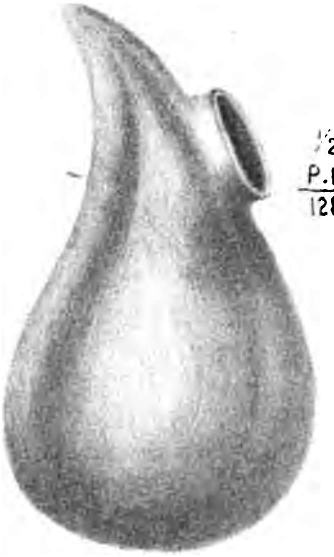
P.E.
128



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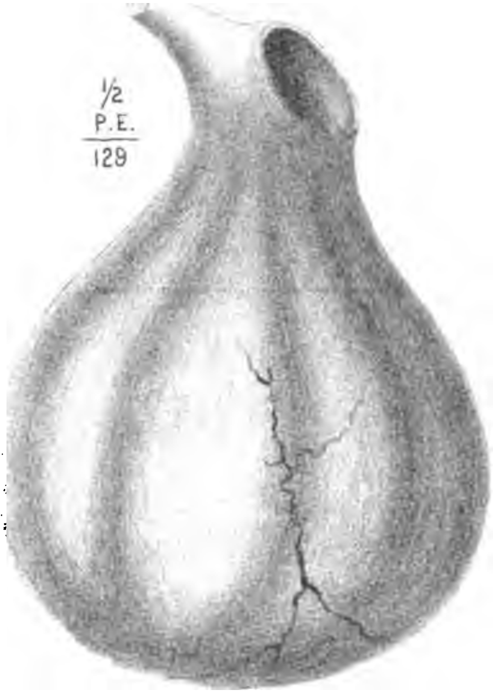
129



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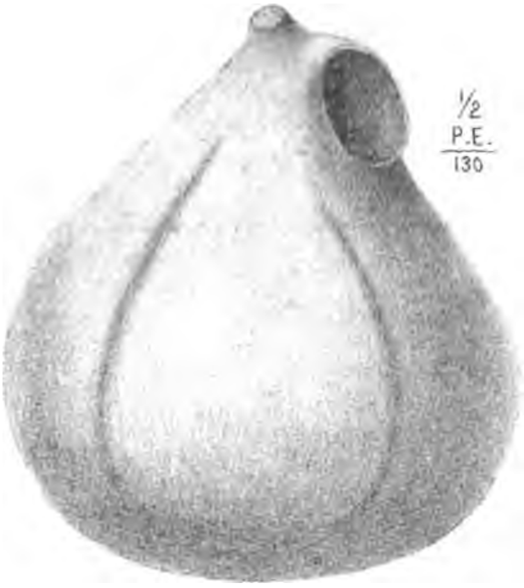
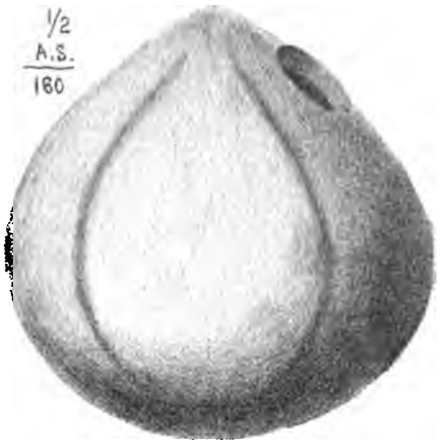
P.E.
130



1/2
A.S.
160



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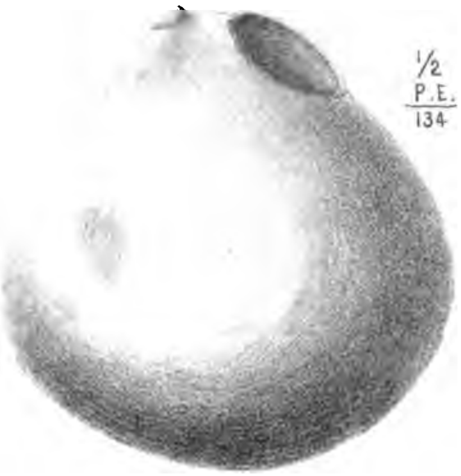
134



G. Hambach, Fec.

A. Gast & Co. Lith.

PLATE XXIII.

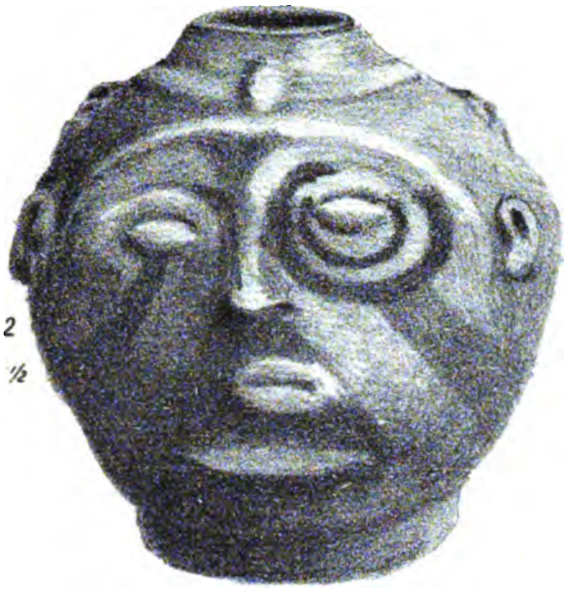
FIG. 1. BLACK, SUN-DRIED SPECIMEN; THE FACE ONLY ON ONE SIDE, THE REVERSE IS SMOOTH; THE FOOT IS HOLLOW AND NOT PERFORATED; THE NECK IS BROKEN OFF, BUT IT HAS BEEN SUGGESTED THAT THIS WAS PROBABLY A LONG-NECKED BOTTLE.

FIG. 2. BAKED SPECIMEN; A FACE ON EACH SIDE; THE VESSEL IS RED, AND THE FACES ARE TATTOOED IN BROWN ABOUT THE EYES, ACROSS THE CHEEKS AND ABOUT THE MOUTH.

FIG. 3. BLACK, SUN-DRIED SPECIMEN. THE TWO HEADS ARE HOLLOW AND CONTAIN PELLETS.

FIG. 4. THIS VESSEL RESEMBLES THE SPECIMEN FOUND IN ARKANSAS (PLATE 18) BUT IS VERY MUCH SMALLER IN SIZE. IT IS A PLAIN, SUN-DRIED SPECIMEN.

FIG. 5. A VESSEL IN THE SHAPE OF A FROG; THE NECK IS DEEPLY GROOVED AND FITTED WITH TWO HANDLES. SUN-DRIED.



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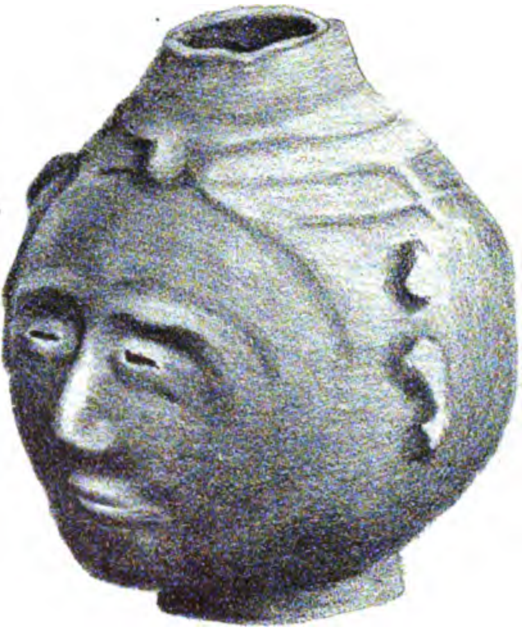

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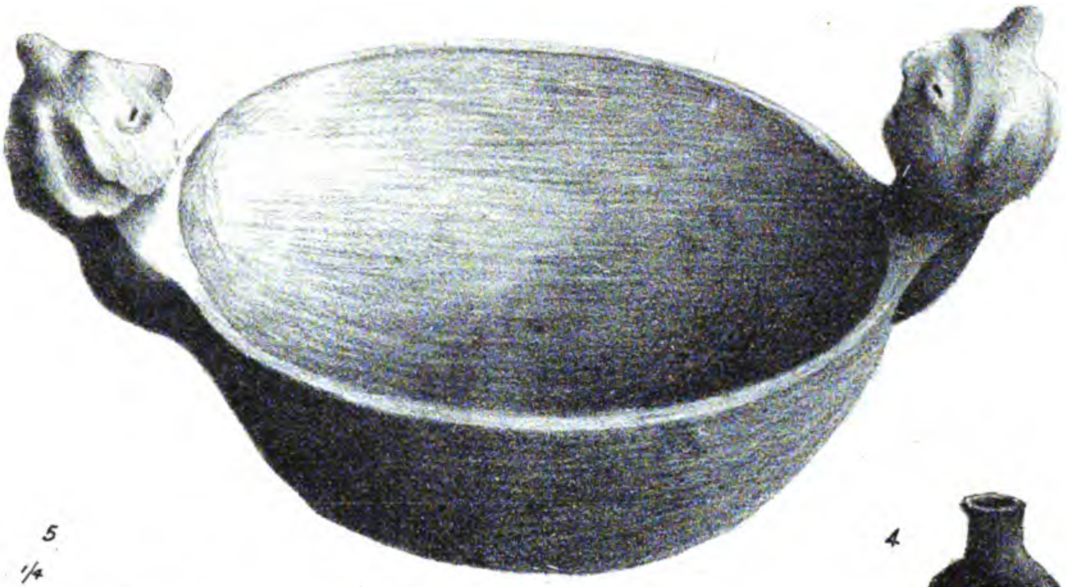

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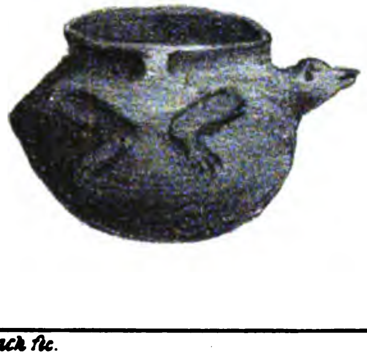

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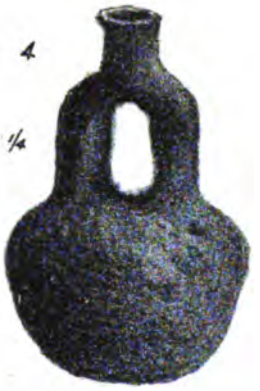

G. Hambach fec. A. Gast & Co. Lith.

PLATE XXIV.

FIG. 1. BLACK, SUN-DRIED SPECIMEN; VERY NEATLY FINISHED AND WELL FORMED. THE MOUTH OF THE VESSEL IS IN THE BACK OF THE HEAD.

FIG. 2. ALSO A BLACK, SUN-DRIED SPECIMEN, BUT NOT SO FINELY FINISHED, NOR SO CAREFULLY FORMED AS THE PRECEDING.

FIG. 3. A VERY FINE, SUN-DRIED SPECIMEN FROM PERRY COUNTY, MO. IT HAS BEEN FIGURED HERE FOR THE PURPOSE OF COMPARISON. THIS SPECIMEN IS NOW IN THE COLLECTION OF THE ILLINOIS STATE PENITENTIARY AT CHESTER, ILLS.

FIG. 4. BLACK, SUN-DRIED SPECIMEN, NOT SO WELL EXECUTED; THE HEAD ESPECIALLY IS MUCH MORE IMPERFECT THAN IN THE OTHER SPECIMENS, THE OPEN MOUTH DETRACTING FROM THE SYMMETRY OF THE FEATURES. THIS FIGURE IS HOLLOW, BUT THERE IS NO OPENING ANYWHERE, SHOWING THAT IT WAS NOT A VESSEL.

FIG. 5. BLACK, SUN-DRIED SPECIMEN. THE FIGURE IS REPRODUCED IN FULL, THE ORGANS OF GENERATION BEING ESPECIALLY WELL EXECUTED. [IT HAS BEEN SAID, BY SOME AUTHORS, THAT THIS IS RARELY THE CASE IN THIS CLASS OF POTTERY, BUT THERE ARE AT LEAST FIVE SPECIMENS IN THE COLLECTIONS HERE IN WHICH THEY ARE WELL SHOWN.]

FIG. 6. THIS FIGURE (SUN-DRIED) IS ALSO HOLLOW, BUT HAS NO OPENING ANYWHERE.

FIG. 7. THIS IS A VERY FINE SPECIMEN. IT IS DOUBTFUL WHETHER IT WAS BAKED OR NOT. IT WAS ORIGINALLY PAINTED, AND WHITE AND RED PATCHES OF PAINT CAN STILL BE SEEN, THOUGH THE DECORATION ITSELF HAS DISAPPEARED ALMOST ALTOGETHER. THE FIGURE REPRESENTS A WOMAN WITH A CHILD ON HER BACK, THE HEAD OF THE CHILD IS BROKEN OFF AND NOT IN THE COLLECTION. THE SPECIMEN IS HOLLOW, BUT HAD ORIGINALLY NO OPENING ANYWHERE.

FIG. 8. BLACK, SUN-DRIED SPECIMEN; IN THIS SPECIMEN TOO THE PENIS IS REPRESENTED IN RATHER LARGE PROPORTION. THE FIGURE IS NOT WELL EXECUTED. THE MOUTH OF THE VESSEL, AS USUAL, IS IN THE BACK OF THE HEAD.

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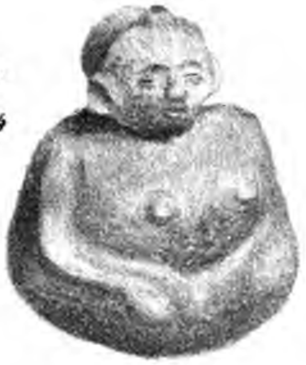

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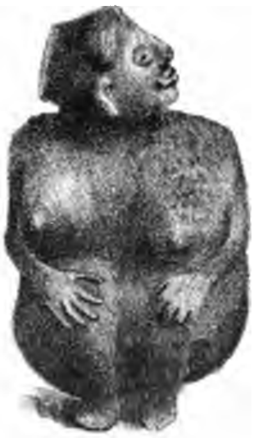

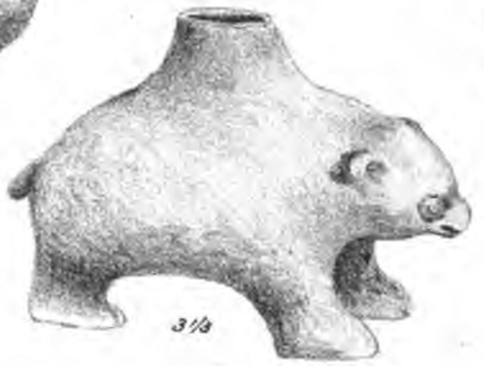

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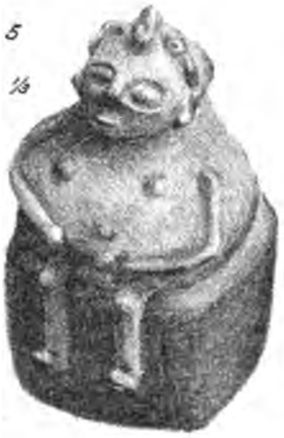

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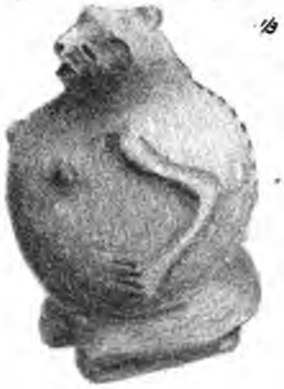

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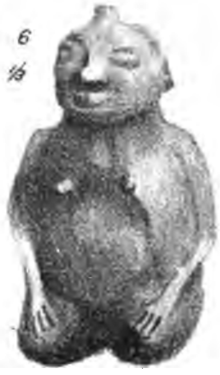

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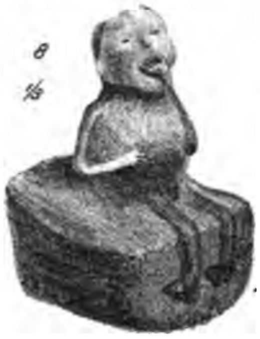

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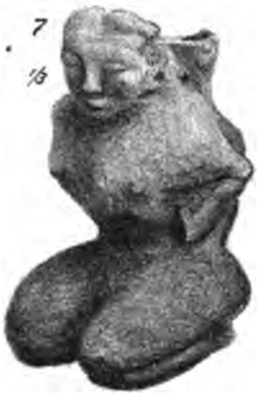

G. Hambach fec.

A. Gast & Co. Lith.

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